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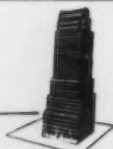
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THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

Volume 11

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AUTOMATION, HUMAN ENGINEERING, AND PSYCHOLOGY¹

NEIL D. WARREN

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AMBROSE Bierce was once called the wickedest man in San Francisco. This probably has little to do with the fact that he wrote a story about a man who invented a mechanical chess player (1). The inventor played game after game against his invention. So marvelous was the machine, however, that it never made a mistake and never lost a game. The inventor tried every legal scheme he knew, but was never able to win. Finally, in desperation, he cheated enough to gain a victory over the machine—which became so incensed over this event that it turned on its inventor and throttled him.

This fable has allegorical significance, if we may believe dire predictions of the machine's triumph over man, which some people have made during recent months. Leading industrialists have found it desirable to attempt to calm fears of the consequences of automation; that is, of automatically controlled industry. Threats of unemployment, overproduction, social dislocations, and so on, have been voiced and debated. The age of automation presents a challenge for the industrial psychologist. At the same time it clearly presents problems of interest to other areas of psychology besides industrial—social, counseling, and experimental among them. And if the machines become much more human-like, they may require the services of the clinician.

Automation—simply defined as the replacement of man by machine or the use of machines to control machines—is as old as machines themselves. For centuries the machine has been nibbling at the responsibilities—and privileges—of man, with the use of such devices as governors, thermostats, autopilots and other servo-controls. Now, with the advent of the continuous-process factory the machine is taking large parts of the areas of human responsibility which remain. To quote Drucker (3):

¹ Address of the President of the Western Psychological Association at the meetings of the American Psychological Association in San Francisco, September 3, 1955.

The Automation Revolution is here, and it is proceeding at high speed. But it will be many years before it permeates the entire economy. Most businesses will not convert to automation overnight but will go at it piecemeal, which will not be easy. . . . But the mental strain will be less. Fewer people will have to "relearn" fewer things; and they will have more time to do it in. While it is a major revolution, automation is therefore not likely to be dramatic; there will be no point when one can say: "This is the year when the American economy went into automation."

But only the speed of automation is uncertain. There can be little doubt that the direction of our progress is toward it. There can be little doubt that it means a tremendous upgrading of the labor force in terms of skill, employment security, standard of living, and opportunity.

How far will this change go? In a previous consideration of this question (9), I was forced to the somewhat reluctant conclusion that there is no limit to the ingenuity of the inventor. It is unjustified complacency to believe that memory, reasoning, and judgment can never be the characteristics of machines—indeed they already exist.

In Volume I of the *American Journal of Psychology*, C. S. Pierce (7) commented that the logical machine is inherently "destitute of all originality, all initiative. It cannot find its own problems." In 1955, I doubt that anyone can be sure that even this is not imminent. Pierce made this further observation: This lack of initiative "however, is no defect in a machine; we do not want it to do its own business, but ours. We no more want an original machine than a housebuilder would want an original journeyman, or an American board of college trustees would hire an original professor." In this comment lies a suggestion of the answer to the question of the ultimate goal of automation. The engineer will go just as far as society will permit. Ultimately society must decide where to call a halt to the development of the machine.

We can expect industry to make use of automatic controls whenever it is economically advantageous to do so. In most industries this will mean considerable, but not complete, automation very soon. In others almost complete automation will be de-

veloped rapidly. I recently visited a large factory in which a new unit was being built. In it, I was told, the entire manufacturing process from the carloads of raw materials to the carload of finished product would be continuous and automatic. To some degree this is occurring throughout industry.

I wish to consider two of the many possible implications of this trend for the science and profession of psychology. First, there is increased need for both basic and applied research in the area of problem solving. Second, the application of information about human behavior to the design of man-machine systems is a rapidly expanding field. This is in the area often called human engineering.

Problem Solving

Besides the socioeconomic problems which industry must face, automation is causing a rapid shift in emphasis from operation to maintenance. The more complex the machine, the more difficult it is to keep it working properly. If our mechanized society is not to be throttled by its own machines, if it is not to suffer the fate of Bierce's inventor, maintenance must be successful. This will require a shift in manpower from operation. In one factory, which is changing to automatic controls, the ratio of maintenance personnel to operators has been approximately 1 to 5. It is now nearer 1 to 3 and it is expected to reach 1 to 1 in the near future. It is probable that in a completely automatic factory the proportion of maintenance effort would greatly exceed that of operation. In one kind of military equipment, which is extremely complex, it is now estimated that for each hour of operation 40 man-hours of maintenance are required.

What is the relation of this trend to problem solving? The key ability of the mechanic who maintains complex machinery is not skill in repair or replacement of parts, but ability to determine what part is to be repaired or replaced. Anyone can replace a tube in a radio or television set. The skill required to replace other parts is not very great—but it takes something of an expert to determine which tube, capacitor, resistor, or what-not is defective. This skill in diagnosing the cause of a malfunction is like the diagnostic skill of the physician. For very complex machines the problem for the maintenance man is scarcely less difficult than that of the physician. In the machine,

the process of diagnosis is called trouble shooting. In certain situations trouble-shooting experts are employed. Their job is diagnosis only and repair is left to other mechanics.

Trouble shooting is a form of problem solving, and the principles which apply to other kinds of problem solving will apply as well to it. The procedures may range from trial-and-error to logic.

It is of interest to note that there has been a considerable increase in study of the problem-solving process in the last five years. As evidence of this, the number of references in the *Psychological Abstracts* dealing with human problem solving has greatly increased on both absolute and relative bases. That this is in part due to a recognition of the importance of the subject for maintenance of machines is indicated by the fact that a considerable amount of the research reported has been sponsored by the Air Force and the Navy. Also, in the 1954 *Abstracts* there appears, for the first time, a number of references specifically to the topic of trouble shooting. These will not be the last, since final answers to the questions of how to select, train, and use trouble-shooting experts are still to be secured. The need becomes greater daily. The production of automobiles, airplanes, home appliances, factory equipment, and so on, of ever-increasing complexity may soon overload our capacity to keep these machines operating.

As one example of research in this area, I may describe briefly a study we have undertaken under contract with the Air Force.² The purpose of the project has been to develop a procedure for training mechanics to do a better job of trouble shooting for a highly complex piece of electronic equipment.

The hypotheses were developed that there is a limited number of general principles in logical trouble shooting and that these principles can be learned as abstractions unrelated to any specific device.

The procedure involved recording complete protocols of the diagnostic steps of experts together with their verbalized reasons for each step. This was followed by an analysis of each protocol and a record of each abstracted principle in symbolic form. With an adequate sample of such protocols from a number of different experts, it appeared possible to establish a complete list of principles.

² Contract AF 18(600)-1206.

The learnability of such principles is to be tested by the use of a specially devised trainer in which each general principle can be demonstrated with any desired degree of complexity. The first year of effort has verified our first hypothesis: that there are general trouble-shooting principles; and the next year will establish whether or not they can be taught using the trainer and procedures devised for that purpose.

Human Engineering

The term "human engineering" is obnoxious to some members of the engineering profession. For that reason I have some reluctance to use it. However, it appears in the *Engineering Index* and in the *Industrial Arts Index* as well as in many articles and publications, so I believe it is here to stay. However, the *Industrial Arts Index* makes it clear that the term is a designation of a topic—and not of a profession. I think it can be demonstrated that this distinction is a valid one at present although it may not continue to be so.

Broadly defined, human engineering is a phase of engineering which applies knowledge of human factors to design of machines—or of products. It is broader than, and includes, the fields of engineering psychology, biomechanics, applied experimental psychology, and others.

The first use of the term "human engineering" was as a title for processes of selection and placement of personnel in industry, and of the choice of a vocation for an individual. In industry this was a process of adapting man to the machine. Psychologists have worked in this area for many years.

When machines are relatively simple, selection and training achieve the purpose of supplying adequate operators. As machines become increasingly complex and the demands upon the operator's skill and knowledge become greater, a point is reached where selection and training can no longer meet the needs.

This point has already been reached in some areas. A notable example is that of aviation. The complex pattern of instruments and controls in modern airplanes taxes the capacities of even the most expert airmen. Poorly designed instruments produce errors and confusion. The necessity of integrating the readings of several instruments to determine a single course of action dangerously delays the pilot's responses. The unsatisfactory de-

sign and location of controls result in mistakes which may be disastrous.

The solution requires designing the man-machine system in such a way as to take full advantage of man's assets and to avoid imposing on his limitations.

Another term of equal breadth which is intended to cover much of the area defined by human engineering is "ergonomics"—the study of man at work. One author has pointed out that ergonomics "is concerned with the study of human behavior in response to external stress, with particular reference to the stress-strain problems of man at work" (5). Changes in design and in work methods can be expected to result from such study.

It is well to point out that consideration of human factors in design is not new—nor were professional psychologists pioneers in the field. It may be said, in all seriousness, that primitive man was a human engineer when he shaped the handle of his ax or club to fit his hand. Certainly engineering designers have taken the human factor into account to some degree for centuries. Even in the application of the sciences of physiology and psychology to design, engineers have pioneered, as Hatch has pointed out, "ahead of the specialists in those fields."

On the other hand, psychologists have not been entirely unaware of the possible applications of their science to such practical problems. In Volume II of the *American Journal of Psychology*, the first article is by E. C. Sanford, and is entitled "Personal Equation" (8). In it is told the well-known incident which led to research on individual differences in reaction time. It is of interest that on page 652 of the same volume there is a report of a device to take into account human limitations in the observation of sudden phenomena.

Primarily as a result of the pressures of military needs during and following World War II, psychologists and others have become increasingly involved in human engineering. Some psychologists have adopted the title of "human engineer" to describe their own function. Seldom, however, can one individual—or one profession—provide the human factors knowledge required by the designer.

Consider, for example, this list of human factor problems encountered in one aircraft factory. This is a sample. Seventy-two were listed last spring and undoubtedly more have been added:

What is a comfortable finger pressure for knobs?
 How much force should be required for a wheel control?
 What is the volume occupied by a man?
 What are the hourly rates of wash-water use?
 What are the angles of vision from a prone position?
 How far away can a pilot see another airplane?
 What is the weight of the human head and brain?
 What should be the height of a "no smoking" sign?
 What are the effects of drugs on the human body in flight?
 How much work space is required for a bartender in a cocktail lounge?

And so on.

Clearly, cooperative effort is called for. As in other areas, the psychologist can serve most effectively as part of a team in which each expert contributes his own special knowledge and skill to the solution of common problems. The trend in industry appears to be in this direction. Although the composition and organization of the team vary widely, there is usually a position for the psychologist.

Brigadier General Don Flickinger, of the Air Force's Research and Development Command, has described a five-man "human factors team" (4). The team captain is a flight surgeon, a specialist in aviation medicine. The other members are an anthropologist, a biophysicist, a physiologist, and a psychologist. The responsibilities of the psychologist include work-space layout, performance criteria, training requirements, component design and mission activities.

Teams of somewhat this make-up have been established in several aircraft factories and there is a trend extending to other industries as well. To consider and to evaluate this trend, it has been proposed that the American Society of Mechanical Engineers establish a working committee (5), including engineers representing industrial engineering, time-and-motion study, machine tool design, plant layout and building design, and health and safety engineering, together with invited specialists in anatomy, physical anthropology, biomechanics, applied physiology, and applied psychology. This is another indication that psychologists will be part of the team approach to design problems.

What can the science and profession of psychology contribute to this important field?

General Flickinger has pointed out that, while there is no lack of interest in or appreciation of human factors, there are three reasons why they have not been fully taken into consideration. First, "lack of fundamental data in the human factors

field" in a form usable by the engineers. As regards the first part of this "lack," psychologists can point to the considerable body of fundamental data about human behavior. The experimental psychologists are investigating many specific problems and have formulated a few general principles which are pertinent to the human engineering field. The *Handbook of Human Engineering Data* (6) first published in 1949 by the Tufts College Institute for Applied Experimental Psychology is, in its latest edition, a very imposing volume. Many psychologists stand ready to tell the designer the facts of psychology.

Are these data in a form usable by engineers? Very probably they are not. We are accused of generalities. Industrialists and engineers distrust generalities. The data most frequently are derived from the aseptic conditions of the laboratory and are not "practical." Or, perhaps, we are not able to convey to the practical designer the significance of our findings.

A research engineer for an aircraft factory recently put it this way: When the design engineer realized that he was building aircraft which taxed the limitations of the human, he turned to those specialists, physiologists and psychologists, whom he assumed could tell him what he must do to alleviate these conditions. In all fairness, he admits they probably did, but he couldn't understand a single word of it.

I am reminded of Robert O. Carlson's comment (2) about similar criticism from another applied area. He says,

Of course we . . . recognize that these criticisms are pure nonsense. Ask any (psychologist) and he may point out that such accusations are undoubtedly the manifestation of a fundamentally dichotomous role-status position in which the out-group . . . project their ambivalent affectual status vis-à-vis their significant-other group, . . . in such a manner so that their primordial unconscious aggression stemming from a latent role identification with an authority symbol, perhaps the outgrowth of a suppressed Oedipus complex, takes the form of a semantic-oriented aggressive syndrome against superordinate members of a prestige structure which seems to threaten their affect and basic ego constellation.

Carlson thinks such jargon is on its way out, and perhaps it doesn't exist in the engineering psychology field—but I'm not so sure. Psychologists often seem to find it necessary to express even simple ideas in words of many syllables. At one meeting

I listened to a paper in which it was reported that the psychologist working as human engineer had caused to be installed—I quote—"a detachable inclement weather protective device." This, I suspect, bore considerable resemblance to an umbrella.

This problem is being worked on. *The Human Engineering Guide to Equipment Design* being prepared by a joint committee of the military services will be practical, direct, and understandable, even to a nonpsychologist. And if all the textbooks in engineering psychology, and human engineering, which are being written, are as good as their authors are capable of making them, there will soon be no room for the engineers to complain.

General Flickinger's second suggestion is that there is need for "a comprehensive plan for data collection, accumulation, validation, and dissemination to working groups, both scientists and engineers" (4).

There have been many serious attempts to plan research in the human factors area. Anyone who begins trying to apply present knowledge to the man-machine problem will recognize the large, and often crucial areas, in which information is inadequate. Many psychologists have expressed disdain for the applied or "program" research. However, it is here that the opportunity is greatest; and this is the area in which the industrial psychologist can star on the human engineering team. Validation of procedures, evaluation of devices, and establishment of norms are tasks for which he is especially prepared. Moreover, just as industrialists have learned that basic research in the physical sciences is profitable, they will inevitably find it desirable to support basic research in psychology and other biological and social sciences. The Bell Telephone Laboratories has provided an example of this effort for many years.

The third lack is that of "training programs directed toward . . . greater integration of . . . knowledge and skills required by life (scientists) and engineering scientists alike which would prepare them for work in this highly complex field . . ." (4).

What is the situation with regard to courses designed to meet this need? Some part of the answer can be found in the results of a questionnaire survey of courses in the area of human factors in engineering design. The questionnaire was brief and simple but, even so, the number of responses

was amazingly large and seems to indicate a considerable amount of interest in this field. The questions were addressed to 116 departments of industrial or mechanical engineering in the list accredited by the Engineers' Council for Professional Development. We received 104 replies.

Of the 104 answers, 67 indicated that no course in the area of human factors in design was offered.

Sixteen other departments reported that they did not have a course specifically covering the topic but that it was treated in part in other existing courses, such as *Motion and Time Study*, *Industrial Psychology*, *Industrial Management*, *Engineering Design*, etc. It is quite probable that many of the 67 reporting "No course" have similar partial coverage but did not report it since this question was not specifically asked.

The remaining 20 departments have one or more courses in the area. The titles are varied. The following course titles were included: *Human Element in Engineering*, *Human Factors in Engineering*, *Human Factors in Equipment Design*, *Psychological Design Factors*, *Creative Engineering*, *Men and Machines*, *Engineering Psychology*, *Human Engineering*, *Methods and Standards*, *Applied Experimental Psychology*, *Perceptual and Motor Skills*, *Psychology of Human Relations*, *Industrial Psychology*, *Introduction to Personnel and Industrial Psychology*, *Personnel and Industrial Efficiency*, *Industrial Leadership*, *Personnel Administration*, *Engineering Administration*, *Environmental Biotechnology*, *Machine and Systems Biotechnology*.

In 11 institutions the courses are offered in the Department of Psychology; 5 in Industrial Engineering; 2 in Mechanical Engineering; 1 in Engineering Administration; and 1 in the Department of Engineering.

In one instance the instructor for the course was trained in engineering alone. In ten cases he was trained in psychology only; in eight cases his training was in both engineering and psychology; and at one institution where several courses were offered the reply indicated training in physiology, psychology and mathematics.

At the University of Southern California we offer two courses: *Human Factors in Engineering*, a course in the College of Engineering taught by Dr. Harry Wolbers; and *Human Factors in Aircraft Design*, taught by Dr. William Grings. The latter is part of our program in Aviation Safety.

Virtually all of the students enrolled in these classes were engineers who hoped to find answers to problems they encountered in their daily work. In their comments about the courses, nearly all have expressed the need for more and more "practical" information.

Obviously, a course or two will not make human factors experts of these engineers. Perhaps they help to meet the need expressed by Professor T. F. Hatch, of the American Society of Mechanical Engineers, that engineers "must acquire a deeper understanding of man" which they must "incorporate into their regular thinking and practice" (5).

If the psychologist is to make an effective contribution to the human engineering field he must acquire a deeper understanding of the machine to incorporate into his thinking and practice. Courses in psychology for engineers and in engineering for psychologists are essential, if only to bridge the semantic chasm between the two disciplines.

At a more fundamental level, an interesting trend is developing which academic psychology must note. This is a combination of engineering training, through the undergraduate degree, and of graduate work in psychology through the PhD degree. In this trend or in some modification of it there may develop a truly new professional who may legitimately call himself a human engineer. At the University of Southern California we have already given one PhD with this combination of backgrounds, and there are five other students at various levels of graduate work in the Psychology Department. Other departments are experiencing the same trend. Since job opportunities in this field are great we may expect the pressure to increase. We must give serious consideration to the kind of program.

The Age of Automation confronts not only the industrial psychologist but the entire profession with changes in research and training. It will undoubtedly add to the trend toward an increasing proportion of applied psychologists in the APA.

But the experimental psychologist, if he cares, can be assured of the usefulness of his research in the areas of problem solving and learning, of perception, of motor skills, or for that matter of any other aspect of human behavior. Moreover, the experimental psychologist is discovering a fruitful approach to an understanding of human behavior as a result of examination of the behavior of machines.

Let the engineer learn more about man—and the psychologist more about the machine. Together, with other human factor experts, they will help industry to supply all of us products of greater efficiency, comfort and safety. We can expect greater value from the things we look at, manipulate, sit on, ride in, work with, or play with. More and more they will be designed to fit us. More and more they will reflect an acceptance of the statement of the philosopher Protagoras 24 centuries ago that "man is the measure of all things."

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CLIMATE OF OPINION AND METHODS OF READJUSTMENT

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NO major issue of our time can be stated adequately until we have acknowledged the necessity of defining, at least for ourselves, what distinguishes this time and makes it appear different from earlier ones. Industrialization and urbanization have steadily increased, and social change has accelerated; but all this has really been going on since the middle of the last century, if not before. What makes the period since the end of the First World War differ so profoundly from any previous one is the consciousness of individual adjustment. The expanding body of psychoanalysis has provided the ideological focus of this development. The quest for an objective man-centered understanding of adjustment, however, is much older and of a more general nature. It has its roots in the anthropocentric individualism of the Renaissance, and later on has become so closely related to the technological development of the modern age that one could conceive of both as convergent aspects of the same trend.

This new scientific concept of adjustment still coexists with a much older set of propositions which, for lack of a better term, we shall call the idea of "moral adjustment." Its aim is to prescribe how man should conduct himself in order to fulfill what in the metaphysics of his time and place is regarded as his promise and human commitment. While the precepts of moral adjustment are very explicit as to how man ought to behave, there is no thought at all *how*, beyond a deliberate act of will, such an adjustment should come about. The new scientific concept departs profoundly from the older one in that it recognizes adjustment as a psychological state which must be realized before any moral mandates can be considered. Adjustment appears now as a delicate balance of aptitudes, dependent on favorable circumstances of early upbringing, and paradoxically enough, relatively indifferent to one's own conscious dispositions. An individual does not choose to be adjusted; he finds himself to be so. Far from depending on good will alone, a sizable minimum of adjustment must already be present in order to let good will prevail

at all. It follows then that in many instances people must first be aided to resolve characteristic conflicts of motivation in themselves with all the rationalizations, substitutions, and restrictions which accompany them regularly, before they can work out an appropriate mode of conduct for themselves.

The new consciousness of adjustment is coupled with a new concept of objectivity. We cannot any more accept on face value what people say about themselves and about others who matter to them. The therapist who deals with their problems, or the social scientist who attempts to understand the principles underlying them, will have to distinguish in many instances three levels of "reality": what one person thinks of his relationship to another person who is affectively important to him (or the "imago" of, and his transference to, that other person); what the other person thinks of the first person (or her "imago" of him and transference to him); and what the relationship between them really is when all the hidden intentions involved in it have been brought out. No statement of conscious aims is complete until the substitutive and defensive aims, which conceal the former, have been clarified too.

This new view of conduct as a complex affair on several levels, as a tentative yet tenacious interlocking of dormant memories with recent expediences (a combination which often hinders as much as it helps) is the historical contribution of dynamic psychology. The future historian of ideas will have to explain why we seem to prefer this term to "psychoanalysis." "Dynamic psychology" seems to hold out an idea of a new psychology in which the classical propositions of psychoanalysis have been integrated with the rest. The word "psychoanalysis" appears to commit us to a lot of uncompromising propositions. "Dynamic" in this sense has a propitiatory tone while holding out, at the same time, a promise of a projected integration. In this discreet way it is at any rate proper to say that dynamic psychology has influenced all stages and aspects of mental health work—in fact, all considerations dealing with man's adaptation to

all that is about him. The consequences are extraordinary, and I should think that even those who have participated in some way in bringing them about would be surprised at their actual magnitude.

In the present discussion I want to turn attention to a small segment of this very broad process of cultural transformation. I should like us to think about the specific methods of rehabilitation which are usually referred to as "therapy." They hold a pivotal position as sources of dynamic theory and as a continued test of its relevance. Psychoanalysis was at first practiced and represented by a group of people dedicated to its purpose, and convinced of its importance. Soon this group, which had originally been brought together by an abiding interest, became what might be called an organized guild of specialists. Because of the growing impact of the new method, those who were competent with it began to attain high prestige, at least among people more directly concerned with the enormous problems of maladjustment. The prestige of the specialists paralleled the advancing status of psychoanalysis. The consequences would merit a more detailed examination (4). For the moment they can be stated in these terms: as the new dynamic approach expanded from the treatment of adult neurotic behaviors to the child guidance clinic, important modifications of theory and techniques were undertaken in response to new problem constellations and to new insights. The procedural model of rehabilitation, however, had remained the same: that of the classical therapeutic relationship pinioned on the recovery of repressed conflict and the gaining of insight. (There have been as yet only two important departures from this model: group therapy and the residential treatment home.) The growing prestige of the new approach led to an inclination toward viewing adjustment problems of all kinds in terms of the classical model of psychoanalytic psychotherapy. A hierarchy of status developed at the same time, measured partly by competence, but also by the closeness to, or distance from, the elite of specialists in charge of the psychoanalytic method. This in turn led to the factual division of psychoanalysis into a general part more or less open to the public, and a more specialized and increasingly more exclusive one restricted to the elite.

It took some time before the human element in the issues of theory and method was properly considered. The possession of effective intellectual

tools gives power as much as material ones did (according to Gordon Childe) at the dawn of history. Ideas are not only a means for more satisfactory problem solving. As we all too well know, they can become objects of intense emotion. When called in question, they will sometimes be defended with an ardor suitable to the defense of home and honor. My argument, however, is not concerned with the sociology of an elite of specialists. I should like to point out the effects which the social prestige of an idea have upon its application. A variety of emotional investments has made it difficult for us to discern where in the field of psychological rehabilitation the issues of method end and those of opinion and attitude begin. This is why I wish to remind ourselves of the dangers of confusing techniques with the status of experts, and of confounding the hierarchy of tasks with the hierarchy of specialists. The following example may offer an illustration.

At one of the regular staff meetings of the Psychological Clinic a request for consultation was being discussed. We had been approached by the father of a 14-year-old boy residing in a nearby community who had come to us at the behest of a local doctor. A few years before, the family had moved to Michigan from a southern border state. The boy had recently been involved in an incident at his school. He had first been chided and criticized by a woman teacher in front of his classmates. Finally when she struck him, riled by his defiance, he struck her back, and ran out of the class. Upon learning of the incident, the principal had at once dismissed him from school. All this had taken place in a high school with chronic problems of discipline. The school is located in a district which, through industrialization and the influx of factory workers from other states in large numbers, had been saddled with a great deal of rowdiness and juvenile delinquency. Supposedly, many of the teachers lived in outright fear of their older students. Several members of our staff had heard rumors of teachers who had been threatened, on whom pranks had been played, who had even been beaten up. The principal made it clear that he could not afford to let such an incident go unpunished. He had at the same time directed the child to the school counselor, not knowing that the boy had already been referred to us.

Up until then the boy's record had been fairly good. His father had quite sensibly stood by him

when he got into trouble. He had proposed to his son that they should get this matter settled without letting the mother know about it. The mother had been ill in the past, and rightly or wrongly, the father and son were greatly worried over the prospect of her learning of this incident. Recently the boy's overweening ambition had been to become a member of the school's football team from which he had at first been excluded because of his slight build. When he was seen at the Clinic he seemed to be in need of showing off. One would have thought of him that he would rather clown for the benefit of the class than be a leader in an open revolt. He was at the same time greatly concerned over his standing and acceptance among his classmates, and was apparently terrified that he might lose face with them. The only people on the school staff with whom he had had trouble before were the woman teacher of the incident and the male colored homeroom teacher, one of the few colored instructors. It seemed to be particularly difficult for this boy in front of his peers to accept disciplining from people whose status he considered low.

The staff of the Clinic wondered whether the boy could profit from guidance and if there was any sense in offering it to him. During the interview he had been quite friendly and responsive; but he had also made it clear that he felt not the slightest need for counseling. He was worried whether his classmates would find out that he had come to the Clinic. The staff agreed therefore that what support we had to give should go first to the parents. After the gesture of dismissal, the principal, too, was inclined to be more lenient and to let the boy return.

During the discussion another staff member and I were struck by the extraordinarily intense feelings shown against the teacher. The staff consisted of advanced graduate students in clinical psychology and in the social sciences, of junior psychologists holding the rank of teaching fellow in the department of psychology, and of the senior staff of the Clinic, including several psychologists, a psychiatrist, and a social worker. With the exception of the social science students, nobody had less than three years of clinical experience, and almost everybody had more. About a third of the group had either been analyzed or had had extensive personal therapy. The group forms a coherent team and is used to expressing its opinions without restraint.

In the present instance almost everybody took the side of the boy, finding the teacher unequivocally at fault. The teacher was severely criticized because of the psychological damage she had done to the boy. Yet the inference could hardly be avoided that the teachers at that school had been under great and continuous stress. With no more than an average neurotic disposition, a teacher might lose control over himself in a situation so obviously fraught with bad morale, overwork, and uncertainty. Yet nobody in this group of well-trained, broadminded, and sensitive clinicians was willing to understand the adverse situation of the teacher in question, nor to appreciate her mortification. Instead they were all obviously quite incensed by the image of oppressive power vested, of all things, in a foolish woman. In other words, the staff did no less than act out an image of the great American demonology by inveighing against authority, and against the witch-mother, all in one. It was startling to see how astutely the group used dynamic concepts for that end. In order to protect themselves against the anxiety which the issue under discussion had subliminally aroused in all of us, the group found comfort in the use of such fashionable concepts as "denying mother" and "castrating woman." To be sure, psychoanalysis more objectively employed could have explained the significance of this incident for the staff quite differently. What they argued, however, was not exactly wrong; it was lopsided because it had to serve two purposes: the avowed official, and an unconscious and unofficial one. The feeling of agreement and identity in the group fostered to bolster it against anxiety was taken as the result of inquiry and discussion, while in reality it expressed dispositions which had been there long before the issue arose.

I have chosen a transparent instance of group countertransference. The response of the group, however, points toward a more general problem similar to what may be going on in much of our collective clinical reasoning. The present incident involved a group of professional people who had demonstrated before their capacity for being both critical and self-critical; but in this case without knowing it they had used their technical facilities for the expression of their own needs. However, there is yet another aspect to this reaction: one might call it *deduction by expectancy*.

I should like to relate now the results of two

studies concerned with the conditions of agreement among clinical groups with a common frame of reference. The first study involves an experiment which grew out of a criticism of Kelly and Fiske's assessment of clinical psychologists (2). In order to demonstrate that projective tests are more valid than the authors of that study had found them to be, two psychologists¹ decided to administer two projective devices to the next 50 patients admitted to their hospital. One of these tests was the Rorschach, the other an expanded form of the Bender Visual-Motor Gestalt Test. The purpose of the experiment was to show that two seasoned clinicians could achieve nearly complete agreement with each other if they aimed at the kind of insight for which the tests had been designed. A list of 22 variables was chosen, of which most related directly to psychoanalytic theory such as "contact with reality," "ego strength," and others. When the ratings of these variables were finally compared, the two examiners found to their surprise that about half of them correlated negatively. The other half showed correlations which would have allowed the inference that ratings were dictated by chance. An explanation for these unexpected results was derived from an extensive study by Edward Malcolm (3) who found that agreement between raters was not greater than the (unintended) correspondence of traits among different patients who were being rated according to their test results. It appeared that psychologists in their diagnostic statements often held on to a preconceived notion, a collective image of a patient's psychological appearance in a given hospital: psychosexually immature with low ego strength, of moderate contact with reality, without overt anxiety, etc. A further analysis of the study mentioned first showed that the two raters were indeed in agreement as far as the relative distance of ratings from each other was concerned. They too both rated ego strength low and sexual immaturity high. What they did not agree on was the actual magnitude of their variables.

I should say at this point that I do not quite agree either with the criticism of projective techniques implied in Kelly's assessment study (1), nor with the convictions which motivated the first experiments. Both expected something of projective tests which they cannot give: on the one hand, a

¹ Personal communication. The study referred to has remained unpublished. For obvious reasons the names of the authors will remain anonymous.

demonstration of validity in long-range prediction in statistical terms; on the other, a sweeping grasp of highly complex and often rather hypothetical factors by means of a few tests alone. Such a grasp so far can only be achieved in the extensive continuity of psychotherapy, from which the variables searched for in projective testing were, in fact, originally derived. The major contribution of which projective tests are capable is rather that of integrating a plurality of data into a comprehensive frame of reference set up to transcend and amend itself when new information accrues (6). At any rate, the results of these experiments allow us to extend the suspicion which formulated when the incident in the staff meeting was discussed. Such meetings may not always succeed in clarifying the state of the problem under scrutiny; instead they may help gratify certain group needs although nobody may be aware of that fact. We have already recognized some of these needs: the wish to belong, to be identified with others through the sharing of an ideology, the need to organize against unconsciously felt dangers through agreement, and many others. These needs are not by any means irrelevant; but they are different from what we officially believe determines such group deliberations. In the lingo of group dynamics, those needs are "hidden agenda" which in effect may outweigh the open and intended ones. The most fundamental moral implication of Freud's great discovery, however, for therapists, diagnosticians, and research workers alike, is *not* to permit one's own unconscious needs to lead one around by the nose.

Each social subsystem has its own hierarchy of power and prestige. Why should it be any different in the ever-increasing field of readjustive work? To be a therapist, or to do therapy, at present carries high prestige. We might have guessed this from observing what a play the slick magazines, the motion pictures, and television are giving it. We mentioned that a hierarchy of methods has become identified with a hierarchy of values. In this connection one might also wonder why psychoanalysis is not only held to be a technically different instrument by many analysts, but a superior, a more ennobling, more exclusive one than mere psychotherapy.

This introduces a third example. In pursuing the question of a differentiated case-specific psychotherapy, David Wineman, our consultant on child development, presented a succinct analysis of cer-

tain professional attitudes toward child therapy. He distinguished two specific attitudes among child guidance workers (psychologists, psychiatrists, and social workers) valid for agencies which are guided by psychoanalytic principles. In such agencies there is a general conviction that a personal analysis is not only an advanced and effective form of learning, but also a status qualification of great importance. Aside from its very relevant rational features, personal analysis perhaps intimates a special kind of contact with the group which unquestionably has the highest status at the agency, the qualified analysts. To the ordinary problems of transference which anyway tend to hang on long after analysis has been terminated, a group attitude is added which perpetuates the transference reaction indefinitely. In such agencies the case consultant is usually a psychoanalyst, or at least somebody who would very much like to be one. The working climate of the group is then greatly affected by the group-enforced need to show both familiarity and compliance with psychoanalytic terminology, not only for the readjustive task at hand in which that familiarity is indeed most desirable, but equally for the less visible but no less decisive needs of group acceptance and status identification. The consultant's clinical acumen is, of course, of real import for the less experienced and less extensively trained child guidance worker. The trouble lies with undercurrents of the situation which, in the characteristic way of such group hierarchies, effects a frame of reference subtly slanted toward status. Thereafter, individual experience will be fitted into it without much question, leading, in Wineman's term, to a common problem of agencies, "frame-rigidity."

The frame in this case is fixed to the ideas of child analysis. Yet it is a rather common experience, at least among those who have learned to formulate such observations instead of repressing them, that the specific propositions of child analysis are not all of equal use for the problems of a child guidance clinic. The results of that carefully perpetuated investigation which analysis is at its best, provide an unending source of stimulation for the worker who has not been swallowed up by the routine aspects of his work. The principles of child analysis are indispensable; but they are not always equally applicable. Instead of recognizing this limitation, however, the common reaction (in Wineman's description) is usually one of two kinds.

Stated paradigmatically, the first one would sound like this: only people on the highest level of training can do "that"—namely, child analysis. As we are not doing "it," we are either not good, or we are not doing therapy at all, or we are doing only imperfect therapy—it can easily be seen how the feedback cycle goes from here to more looking-up-to those believed to be the perfect therapists. A corollary is the following: it's all because we missed the real, the right training. A miracle method exists which answers all our prayers; only *we* don't have it.

The second type, a more self-protective one, would hold essentially with the first, but has thought of a good way for keeping self-respect. It would say: child analysis is, *of course*, the best method. Our kids, however, do not respond to it for some strange reason. The problem is simply that *we* do not have the right clients or the right method.

Again the problem here is not in the method, but in group distortions concerning the scope of the method. It is not at all easy at present to decide where the boundary lies between the plain realistic capacities of the method—in our case: child analysis—and the consequences of a high-status system which the method helped create, but which is decidedly irrelevant to it. As a result, the method is taken as a kind of absolute when it would be of the utmost importance to re-evaluate and modify it continuously in the light of new observations. It is not too exaggerated to say that we see in our cases mainly what we have been taught to expect from our theories. The classical theory of psychosexual development provides a prime example. The essential correctness of this proposition is unquestioned: it shows up over and over again. What may have been determined beforehand on the basis of group status and "frame rigidity" is the accessibility and the relative significance of psychosexual material in terms of the conditions under which readjustment is undertaken. But in some instances, it may not be profitable to deal with it; or impossible for the child to accept it without preparation of such length that it cannot be provided outside of child analysis. If the young clinician chastises himself publicly (type 1) because the "right" material is not forthcoming, he reacts in the wrong manner to a correct observation: his client, the child, is somewhere concerned with the problems for which the therapist is looking, and had we but

world enough and time, the child by and by would probably tell us about them. The contrite clinician is, however, *wrong* when he argues that, since he is not getting the "right" material, what he is doing cannot possibly be good. The confusion comes from an orientation which makes an absolute of a specific frame of reference: How far am I from the really pertinent material? How far am I therefore from the real neurosis-producing events in the client's life? But what is the "right" material with little Johnny right here and now, in terms of the multiple realities which we have to consider: the distance which has to be travelled when Johnny is brought to the clinic; his mother's rapidly dwindling patience with the whole enterprise; the secret prohibitions, intimidations, temptations, and secondary gains through which the family actively participates in his neurosis; therapy-time-and-talent which the agency has available at that moment, and a dozen other known and unknown factors? Until we learn to keep in abeyance the preconceived notion upon which "frame rigidity" is based, until we allow other possible causes of difficulty, and hence their possible relief, to come to our attention, many phases of our work will bounce back from our inelastic approaches, leave us with uncertain results, and Johnny, not unlikely, with most of his troubles.

What then *is* the meaning of the data which we *do* obtain in child therapy, or, for that matter, in any other readjustive effort? Are they a function of the degree of competence of the therapist? Or of a variation in the psychological make-up of the clientele? Or of the lack of a continuous self-transcending revision of the entire theory of child therapy in the light of new experience? We can expect practical answers only from a much more searching scrutiny of the empirical interaction between client and therapist than we have had so far; and from a continued orientation toward a theory of personality development-and-deviation on which any therapy must naturally depend. What is the cause of the disorder before us, or what is the meaning of what the child tells us about, or, more likely, withholds from us? Is it defensive? Or restitutive? Or what else? Which of the sometimes conflicting assumptions about the major schemata of growth are acceptable? From there we might then derive a guiding outline of what therapy

can hope to accomplish, or for what, at any rate, it should aim. The outline will then have to be modified again by the specific sociocultural, economic, ecologic, and administrative conditions under which readjustment works (5). Quite possibly the goals and means of therapy might then become much more pluralistic than they are at the present time; or more accurately, than they are at present admitted to be. This will not in the least save us unending concern with the involvements and pitfalls of the therapist which, since Freud, must distinguish all serious therapy. It will not help us over the fact that the therapist always needs *more* skill and *more* understanding than he has; and that, especially in the beginning of his career, we must be prepared to see him shy away from distasteful material (with an *ad hoc* explanation, or without even being aware of it), and must anticipate that the incessant signals of the client's distress as likely as not will alarm his own protective inhibitions.

The purpose of this paper was to point up that the progress from individual observation to the formation of generalized principles in the field of psychological rehabilitation depends not only on rational effort and good will, and on the presence of devoted specialists; but also conversely on the arrest which progress suffers when considerations of prestige and power begin to influence the methods of readjustment.

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OF VALUES, VALUE LAG, AND MENTAL HEALTH

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WHEN the Committee on Mental Health of the APA met in New York last September, it so happened that the first five minutes of conference were spent agreeing unanimously that we would not define the term "mental health." This was a relief to all of us, and we quickly settled down to some productive work.

I would like to ask you for the same favor. Let us assume a few things. First, let us agree that mental health is necessary, virtuous, and good. Second, let us assume that social sciences have realized that they have the responsibility of being agents in the fight for conditions of mental health. Three, let us agree that the most important phase of mental health activity is the prophylactic one. By the latter, we mean the creation of conditions within the individual which will render him sufficiently capable to withstand the various stresses and pressures to which he will be subject during his lifetime.

One of the social scientists, the anthropologist, has raised the prophylactic aspects of mental health to an important hypothesis in his field. Ralph Linton (1) in the Introduction to Kardiner's *The Frontiers of Society*, says, "The basic personality type for any society is that personality configuration which is shared by the bulk of the society members as a result of the early experiences which they have in common. It does not correspond to the total personality of the individual, but rather to the project system, or in different phraseology, the value attitude system which is basic to the individual's personality configuration. Thus, the same basic personality type may be reflected in many different forms of behavior and may enter into many different total personality configurations."

What makes Linton an anthropologist, not a mental health expert, is the fact that he confines himself to the *study* of the processes. He is an onlooker whose responsibility is looking and understanding. He is, so to speak, a diagnostician primarily. The mental health scientist, on the other

hand, is interested not only in understanding, but also in amending, reshaping, altering—his aim is not only diagnosis, but therapeutic activity in the widest sense of the word. The anthropologist is interested in the past and present of a culture; the mental health scientist in its present as well as its future. Both work on the same continuum, though on different ends of it.

The mental health expert is interested in good functioning personality mechanisms, as well as in the value system within which these mechanisms operate. The interrelationship between these two, personality mechanism and value system, is complex. Suffice it to emphasize that the mechanisms and their structure not only serve to maintain the value structure, but also to alter the latter according to the dictates of reality.

When the anthropologist studies the value structure of a culture, he declares himself most competent to do so where the society under study is small and its institutions stable. "Basic personality" types can be established best when the elusive forces of cultural activity have had time to develop stable and consistent patterns. It is the stability of a society which aids an anthropologist to hunt down the sensitive patterns of the unconscious shaping of values.

We have some historical evidence that some time-epochs are characterized by rapid, others by slow, cultural changes. It is speculated that the former is deterrent, the latter conducive to good mental health conditions. If the change in values becomes noticeable but within a span of two to three generations, our social system can take care of the situation. An individual who is past middle age and who is out of step with the contemporary value system can be called "old-fashioned," "reactionary," and allowances will be made for his backwardness. This would be the case when a man believes that woman's function is the bearing and raising of children and the preoccupation with domestic duties. If, though, he adds to these, that woman has never been able to do well in the sciences and should not

meddle with them, he may lose some of the protection granted to him by his "old-fashionedness."

When the values change so rapidly as to make an individual out of step with the value system within one generation, the repercussions may be deep and severe. They may not be noticeable in the surface behavior of a particular individual. The mechanisms take care of not letting the problem interfere with the individual's social interactions. The damage of the individual's "out-of-stepness" with contemporary value systems is often obliterated by their "good adjustment." Let us take as an example a young woman. She obtained up-to-date coeducational and liberal schooling. She went through college with the intention of becoming a journalist. Following graduation, she obtained a job and had good chances of making a career of it. Unfortunately, she was not only a woman, but also a female. She fell in love and compounded the error by marriage and two children. She is a good and conscientious mother—she is well adjusted. Everyone—even she, herself—believes in it. Still, to the observer, she is different—she lost many qualities which made her outstanding. She lost lustre, some of her sparkle and *joie de vivre*. She is not and never will be a psychiatric patient. Only rarely will she be bitter—even less complaining. She has excellent mechanisms of adjustment and she uses them to advantage. Her ego has effectuated a compromise and compromise is considered to be the acme of adjustment.

In other instances where the adjustment mechanisms are less perfect than in our hypothetical woman, the result may be a deeply disturbed patient. In the case of the young woman, it was the value judgment "a girl has the same opportunity and can do the same as a man" which was replaced rather suddenly by the value "housewife," etc. Our present age does not emphasize the value "housewife" either in education or in school. To the contrary, there is a thorough indoctrination that being a housewife is a fate and not a call. Becoming a housewife requires considerable value adjustments from any woman.

This example is only one illustration of the many value changes which occurred within a short span of time. In the '30's, it was pacifism and isolationism; in the '40's, war and some internationalism; in the '50's, democracy versus security. In the '30's, we learned depression and the need for economic security; in the '50's, we must believe in eternal

prosperity, and any comparison to the economic events of the '30's is decried as heresy and prophecy of gloom.

The scientist in the '30's lived close to the laboratory and far away from Washington. He moved into government in the '40's and in the '50's is quite confused about his move. In psychology, we came from academic to applied, from strictly scientific subjects in the '30's to such practical themes as "learning in psychotherapy." While we stressed catharsis and the necessity to lift repression in the '30's, we now extol ego psychology and accept dicta like "in therapy we replace ill-fitting repressions with more adequate ones."

One of the reasons why our time and our specific culture fosters rapid value changes is explained by the growth of the media of communication, which are unique in that they can spread as well as create new values within short spans of time (2). In this respect, our culture has less value stability than many contemporary non-Western cultures.

When an individual faces the necessity either to give up, devalue, or exchange one value for another, the personality mechanisms are called into action. These, when functioning successfully, should but cannot always take care of all the necessary value changes. The chief instrument of value adjustment is primarily the ego's capacity for making compromises. This point of view, though essentially correct, does not take into account two important factors. First, not all compromises are good. In fact, only few are. Well-chosen and well-executed compromises often leave hurt and pain as the residue; on some levels of personality functioning, any compromise is damaging. Last, not least, the number of compromises any given individual is capable of making is limited. It is questionable that all values can be compromised with. Some values are so fundamental to personality structure that any attempt at compromise weakens that part of the personality structure referred to as superego, resulting in considerable damage to the total personality structure.

Parenthetically, how much of a child's personality structure is damaged by overhearing his parents discuss the pending income tax returns.

Second, the transforming and changing of values requires a great deal of time. Because of their irrational character, values are little amenable to reasoning and to volition. If, as mentioned earlier, the changes are slow, the adjustments are difficult

but possible. If they are fast, the individual falls further and further behind; instead of assimilation and integration there is superimposition of layer upon layer of nonintegrable values. The new values often exist side by side with older values, resulting in an overt or covert conflict. Frequently then, the end result resembles a cancelling-out process in which the new and old values are kept in suspense by both being inactivated. This phenomenon of coexistence of superego-imposed values as a result of rapid value changes is what is meant by "value lag." The argument that the problem of value lag should be solved by better ego functioning is fallacious. The argument is fallacious because it assumes that the ego is all powerful and capable, that it can be groomed and made to cover all human stresses and strains. The ego *does* deal with "value lag," but at a price. It is exactly this price in which the mental health expert is interested. My opinion is that it is too high already and it has not yet reached its peak.

The matrix of the superego is values. Stability of values is necessary for superego formation. The price of tampering with the superego is considerable, as we all so well know. When values are required to change too rapidly, the superego as a whole is under stress. The result is either increased rigidity with commensurate increase in resistance to change, or disorganization and too little resistance to change. The outcome lies somewhere on a continuum between zealot and psychopath.

The capacity of the superego to reorganize its own structure, to alter its own processes, is relatively unknown. There is some evidence that under favorable circumstances changes can and do occur. On the other hand, we also know that this capacity is limited. The superego can be stretched to the point of breaking. Value compromises leave behind severe superego scar tissue which frequently requires multiple therapeutic surgery.

The task of the mental health scientist is to provide means and ways by which value lag can be kept at a minimum or avoided altogether. What can be done?

First, we, the social scientists, must overcome our deep-seated resistances to dealing with values. Second, we must accept values as the matrix within which the adjustment processes function, and not elevate the mechanisms to the position of mastery over values. Third, we must apply research to the problem of value formation, the process of value

change. There needs to be more research on optimal conditions for value change, value lag, value integration, and value disintegration. All this will take time. What can we do at the present?

Above all, let us recognize and face the problem of value and value lag. Then let us impress its importance upon others. We can only speculate as to how to cope best with value lag. The following avenues appear promising:

We cannot slow down the process of value change. Can we by the method of logic and/or research discern between stable and relatively immutable values and others which are liable to short-time change? "Motherhood," as well as acceptance of one's sex role, appear to be stable values. Earlier an instance was reported where this value was inadequately integrated. The stable values should be made subject to intense study. We could investigate some European countries, Switzerland for example. Here a number of values are made synonymous with being Swiss. There exists a national value structure, intensively indoctrinated in the home, at school, and at play. It is held that this basic value stability has a beneficial effect upon the individual. It is often postulated that mental health is good in societies with stable value structure. Do statistics bear this out?

We must distinguish at this point between a structure of stable values, and a value structure which is arteriosclerotic in character. Often the latter is mistaken for a stable one. Stable values which persist over generations would have to be investigated with the aim of weeding out those values which are still "on the books," so to speak, but which fail to have any functional meaning for our society. Rugged individualism, a value still much in evidence in our society, a remnant of the frontier value system, may be one of those hindering, pseudo-stable, sclerotic values. In a time of increased federalization, planned economy, and mechanization, this value to many an individual would be more of a hindrance than a help. Thus we may discern between stable values which help the individual, representing contemporariness, and those pseudo-stable values which have lost their functional meaning, which are deadwood in the "superego." Mental health scientists may face the necessity to take a stand concerning the advisability of supporting stable, opposing "pseudo-stable, sclerotic," values.

The insistence upon integration of basic values

in early childhood and school education would be one of the functions of the mental health scientist. This appears a matter of commonsense, but acting in its behalf is not an easy matter. In order to propagate childhood indoctrination of "motherhood," etc., we may well come into painful conflict through misunderstanding with the emancipation movement of women. It would even be misunderstood by many of the teaching profession who may feel that this could not be part of "liberal education." Still the curriculum is built around stressing the woman's role as equal and alike rather than as equal but different.

Speaking about schools, what about the value clash between the educator's attempt to give his students a humanistic view of the world, and industry's increased demand for the mechanized man?

Some values may emerge as sensitive to change within one to two generations. Such a value may be represented by the earlier mentioned "housewife," or "scientist," or "sentimentalist." The unstable values often are incompatible with the more basic values, counterpointing the difference between generations rather than the likeness which the basic values emphasize. Should it be the task of the mental health scientist to oppose in word and deed those unstable values which are detrimental to development? Can we dare to advise and/or act against a value by predicting its potential as a source of conflict? So far everyone who attempted to deal actively with values rather than to submit to them did so by his conviction that he presented "right." Can we scientists invade critically the area of values with no convictions, no moral ban-

ners, no preaching of gloom, no concept of right and wrong, invoking only the operational concept of "adjustment"? Even if that were possible it would precipitate upon us the wrath of a considerable segment of society. The social scientist would be accused of propaganda, thought and feeling control, Fascism, Communism, to name only a few. The physicist, less wise in the ways of the world than some of us, is learning the lesson of his mistake, which consisted of having discovered sin. Can we, the social scientist, permit the creation and perpetuation of maladjustment, which in our language is equal to sin, by averting our eyes from the problem of values?

I cannot give an answer to this question. I think I am apprehensive about having to make up my mind to be actively against sin, meaning to speak up about values and the virus of conflict which attacks them. Together with others, though, I could tolerate the discomfort. Maybe the first task of the social scientist is to create a mental health scientist who, among others, is not afraid of society.

My subject was the problem of value and value lag, which I consider a serious one. What is required for its solution from us social scientists is primarily insight, courage, and research skill. All these we possess. I, therefore, see no reason why we cannot deal with this problem successfully.

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PROFICIENCY TEST DEVELOPMENT AND RESEARCH FOR THE AIRMAN CAREER PROGRAM OF THE UNITED STATES AIR FORCE

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2200th Test Squadron

THE present paper presents a summary of the mission and functions of the 2200th Test Squadron. This Air Force organization annually develops or revises approximately 200 paper-and-pencil tests, receives and processes the answer sheets resulting from the administration of these tests to approximately 200,000 airmen stationed throughout the world, and conducts the operational research necessary to the maintenance of the testing program.

The writer intends to give only a bird's-eye view of such aspects of the testing program as test development, administration and control, processing and analysis, and research. It is hoped that this approach will provide a general understanding of the functioning of the entire Proficiency Testing Program and serve as a foundation and frame of reference for future studies published by the organization.

BACKGROUND

Experience gained from the study of human resources during World War II revealed that the then utilized systems of personnel selection, classification, training, and utilization were inadequate for the needs of the modern Air Force. It was also quite clear from an evaluation of rapid technical developments and increased training costs after the war that the maximum benefit to both the Air Force as an organization and to enlisted men as individuals could only occur if the individual remained in the service on a career basis.

The Airman Career Program which was implemented in 1949 introduced a complete reorganization and regrouping of the jobs performed in the Air Force into Air Force specialties (AFS's), career ladders, and career fields on the basis of similar knowledges, skills, and other abilities. A career ladder is composed of five main skill levels, the unskilled, semiskilled, skilled, advanced, and superintendent levels. Each of these levels is

identified by a 5-digit Air Force specialty code (AFSC). One career field is generally composed of several career ladders.

The job progression for one ladder of the Personnel (73) Career Field is shown in Figure 1 (4). In this figure, the skill level and the grade or rank corresponding to each specialty are also indicated. The first two digits of the AFSC for each specialty indicate the career field. The career field subdivision is identified by the third digit. The fourth digit of the AFSC indicates the skill level of the specialty within the career ladder, generally referred to as the 3-skill level (semiskilled), 5-skill level (skilled), or the 7-skill level (advanced). The last digit of the AFSC identifies a further breakdown of one career field subdivision if this is neces-

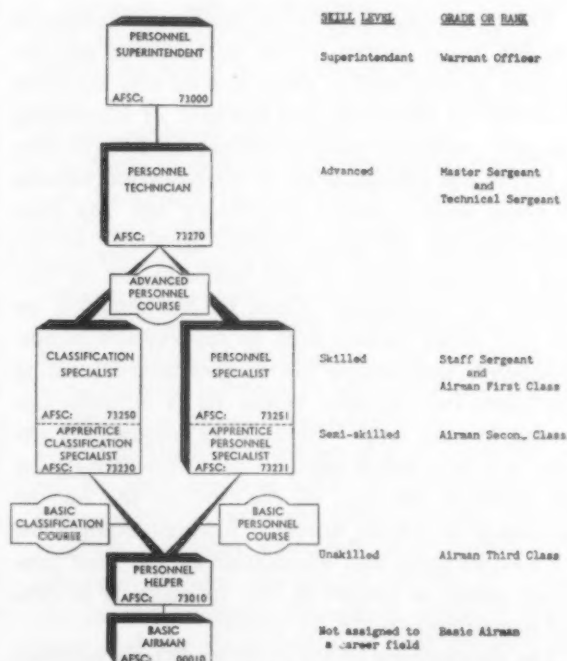


FIG. 1. Typical career ladders (Airman Personnel Career Field) showing routes of progression, formal training courses, and skill and grade levels related to the steps of the ladders.

sary. An example of this is shown in Figure 1 where 73250 represents a classification specialist and 73251 represents a personnel specialist.

In addition to Career Field Charts, detailed specialty descriptions for the skilled, advanced, and superintendent levels of each specialty are published and disseminated to the field where they become available to every airman. By examining his Career Field Chart, an airman can see the routes of progression and the training courses which are available to him and by studying the specialty descriptions, determine the job requirements he will have to meet at each step of his progression up the career ladder from basic airman to warrant officer.

The Career Program also provides for advancement in skill qualification with corresponding promotion in pay grade level on the basis of demonstrated job proficiency. The introduction of proficiency tests to the classification system demonstrates to every airman that his rate of progress depends to a great extent upon his own initiative and willingness to learn and to absorb the technical aspects of his job. The encouragement of the individual airman's initiative and the assurance of equal opportunity of promotion are essential to a career program.

The philosophy underlying proficiency testing in the Air Force results in the qualification for upgrading in skill level of those airmen who are more proficient in their jobs and the task of identifying the most proficient group of airmen in any specialty is left to the consideration of classification boards. In other words, once a proficiency test has been authorized for use in a particular specialty, an airman must qualify on the test before he can be considered for upgrading. Once he has qualified on the test, other factors such as supervisor's recommendation and completion of mandatory training are taken into account before he is actually upgraded in skill level. Because an unqualified airman in a responsible position could unwittingly be the cause of the loss of life and/or the loss of thousands of dollars worth of intricate equipment, the identification and elimination of the least proficient group of airmen in any specialty is of central importance to the Air Force.

The development of the proficiency tests required for the Airman Career Program began in 1949 with the establishment of two test development units, one at Wright-Patterson Air Force Base, Ohio, and the second at Scott Air Force Base, Illinois. In

1951, a third unit was established at Mitchel Air Force Base, New York. By early 1953 the testing program was firmly established and Headquarters USAF directed the consolidation of the three existing units into the 2200th Test Squadron which is now located at Mitchel Air Force Base under the jurisdiction of the Continental Air Command.

The 2200th Test Squadron is responsible for the development, revision, and analysis of Airman Proficiency and Air Force Job Knowledge Tests, including the maintenance of central scoring facilities and files of test items, test booklets, and test results (1). It develops study reference lists which are published and distributed to all Air Force activities and used by airmen when preparing for examination. The Squadron monitors and coordinates the testing program with major air commands and subordinate testing activities worldwide by regularly disseminating instructional letters concerning scheduled testing periods and other information which is considered essential to the efficient operation of the program.

TYPES OF TESTS

The tests described below are currently in operational use throughout the active Air Force and the Air National Guard to measure job proficiency at the different skill levels of most career ladders. Proficiency tests are now available to cover the jobs being performed by 97 per cent of the 800,000 airmen of the Air Force. To permit standard machine-scoring procedures, all of these tests are composed of multiple-choice items with four alternatives.

Air Force Job Knowledge Tests

Air Force Job Knowledge Tests (AF JKT's) are short 65-item tests designed to determine whether airmen possess the basic job knowledge necessary to perform satisfactorily at the semiskilled level. These tests are administered primarily as a prerequisite to the award of a semiskilled specialty. They are also used at the discretion of unit commanders to verify the prior award of a semiskilled AFS to airmen who had not previously been tested. The AF JKT's may also be used to identify by-passed specialists—those airmen who have attained sufficient skill on related civilian jobs or during previous service for award of a semiskilled AFS without further training. In the event

of mobilization, it is anticipated that AF JKT's will be used at induction and processing centers to identify those personnel who possess sufficient technical knowledge to facilitate job assignment without the necessity of long and costly technical school training.

Job Knowledge Tests may be administered either to individuals or to groups of airmen as the need arises in the field. The answer sheets are scored locally for immediate personnel actions and then forwarded to the Test Squadron for analysis and research purposes.

Airman Proficiency Tests

Airman Proficiency Tests (APT's) are composed of 148 multiple-choice items and are designed to determine whether airmen are qualified to perform satisfactorily at the skilled and advanced levels. Separate tests are developed to measure job proficiency at both the skilled and the advanced levels of most career ladders. Whereas the 5-level APT is concerned almost entirely with technical job knowledge, the 7-level APT contains a certain amount of supervisory material as well as advanced technical information.

Airman Proficiency Tests are administered in the field on a regularly scheduled cycle basis, each cycle lasting six months. A cycle is divided into three phases, each phase covering a two-month period and consisting of a primary administration during the last full week of the first month and a make-up administration four weeks later. During each phase, the APT's for a varying number of career fields are administered so that one cycle encompasses all career fields. The answer sheets resulting from these administrations are centrally scored in the Test Squadron.

Once an APT has been authorized for a particular specialty, qualification on the test meets the mandatory knowledge qualifications required for award of the AFS and an airman can be considered for upgrading in skill level. If an airman fails to qualify, he can take the test again during the next cycle, six months later. If he again fails to qualify, he must be interviewed by a classification board and is subject to reclassification procedures before being permitted to take the test again.

TEST DEVELOPMENT

New and revised AF JKT's and APT's are developed by teams of subject-matter specialists

(SMS's) who report to the Squadron for periods of 35 days temporary duty. Existing tests are generally revised after two years' use. The eight or nine teams on duty during a given period constitute one test development project. During the course of one year, eight development projects are generally completed. Although the number of tests developed by one team varies with the structure of the individual career ladder, each team generally constructs a minimum of three tests, an AF JKT for the 3-skill level, and two APT's, one for the 5-skill level and one for the 7-skill level. The team assigned to the career ladder shown in Figure 1 developed a total of five tests, two AF JKT's, two 5-level APT's, and one 7-level APT.

Subject-matter specialists are usually noncommissioned officers in the grade of technical or master sergeant who are qualified experts in the job area for which tests are to be written. The number of SMS's comprising one team varies between three and seven, depending upon the number of tests to be developed and whether the tests are new or revised. The SMS selection process begins when Headquarters USAF notifies major air commands of the numbers, AFSC's, and experience requirements of the SMS's who are to be chosen for a particular test development project. Although final selection of individual SMS's is carried out within the major air command, special efforts are made to secure SMS's from at least three major air commands for each team.

Because proficiency tests are constructed for airmen, by airmen, there is less likelihood of the items reflecting a "bookish" or Manual approach to job knowledge. The ideal item is one which involves a problem occurring on the job. It is phrased in job language the average airman can understand and is Air Force-wide in application, that is, not peculiar to procedures followed in one particular major air command or geographical location.

During the first two days of a development project, the total group of SMS's is given a comprehensive orientation program conducted by Squadron military personnel and staff psychologists. This program includes discussions of the purposes of the testing program, the use of specialty descriptions and the development of test outlines, techniques of item writing, interpretation and utilization of test and item analysis data when these are available for revised tests, and types of items which have been found to be worthwhile.

Each team works directly under the guidance of a test psychologist who is responsible for the functioning and productivity of the team. The first task of the team is the production of an outline which assures coverage of the specialty as it exists in the field and as it is described by the specialty description. If it is believed that the specialty description does not accurately portray the duties as they exist in the field, the team submits specific recommendations to Headquarters USAF concerning the revision of the specialty description. Since each test item carries the same weight (correct answers scored plus one and incorrect answers scored as zero), the test outline is weighted in terms of numbers or percentages of items.

The team then turns to item production. During this process, each SMS generally assumes primary responsibility for a particular area of the outline. The psychologist reviews items as they are produced, working with individual SMS's or with the entire group as the need arises. Before an item may be tentatively accepted for inclusion in the test, it must be approved by the entire team. Following team approval, test items are subjected to editorial review. The review psychologist, who generally handles two teams during each construction project, works closely with the teams and is free to call upon the assistance of an SMS in the solution of any problem that may arise. The review psychologist examines each item for general clarity, accuracy of technical content, adherence to item-writing principles and to rules of grammar, format, and readability level.

The team produces approximately 200 usable items for each APT. Of this number, 148 are selected for use in the final form of the test and the remainder used as alternate items for later revisions. The test is then typed in tentative order and reviewed by the SMS's, test psychologist, and review psychologist who work as a group to resolve any differences still existing and agree on the final form of the test. Following further checks, reviews, and correction, the test is forwarded to the Air Adjutant General for printing and distribution by the Government Printing Office.

The final task of the SMS team is the development of a Study Reference List for each test developed. A Study Reference List consists of the primary references used as sources for test items plus other general references which the team feels will be useful to examinees. These individual lists

are consolidated by career field, printed, and distributed to every base throughout the Air Force where they can be used by the airmen preparing for examination.

TEST ADMINISTRATION AND CONTROL PROCEDURES

The success of the testing program depends to a great extent upon the efficiency of approximately 750 test control officers who are stationed at every major Air Force installation throughout the world. The Test Control Officer is responsible for the operation of the testing program in the field. This includes the preparation of rosters of eligible airmen, requisitioning and accounting for the proper test booklets, insuring standard test administration procedures, and inspecting and forwarding answer sheets to the Test Squadron for scoring.

For security purposes, all printed tests used in the testing program are designated as controlled items and handled in accordance with strict accountability procedures published by Headquarters USAF. Individual tests are assigned an Air Force Personnel Research Test (AF PRT) number and copies of the test booklets for each AF PRT are numbered consecutively.

The principal method used by the Squadron for communication with test control officers in the field is the publication of periodic letters. Six months prior to any given test administration phase, a Requirements Letter, listing the new and revised APT's which will be available for that testing phase, is disseminated from the Squadron. When this letter is received in the field, the test control officer estimates the number of copies of each test that he will need and forwards his requirements through major air command headquarters back to the Squadron. IBM Hollerith cards listing the requirements by testing activities are prepared. These cards are then used to prepare a complete distribution list for each AF PRT which is forwarded with the test to the printing office where distribution of the test booklets is accomplished automatically.

Three months prior to the test administration phase, an All Test Control Officer Letter is prepared for distribution. These letters contain a complete listing of all tests authorized for administration during that phase (new and revised tests as well as those tests authorized for reuse), instructions for submitting emergency requisitions

for test booklets, instructions for interpreting rosters of test scores being returned to the field, and explanations of new procedures being instituted in the testing program. Whenever special types of data concerning groups of examinees are needed by the Squadron for research purposes, the procedures to be followed in collecting and recording the data on answer sheets are given in the Test Control Officer Letter.

TEST PROCESSING AND ANALYSIS

During a typical APT administration phase, the Squadron receives approximately 750 registered packages containing some 40,000 answer sheets which are logged in, processed, and returned to the field within a 4-week period. The logging procedures serve as a permanent record of packages received and as a check at the end of the processing period that scores were mailed out for all answer sheets received. As packages are received, answer sheets are grouped by test, scanned for stray marks and double answers, and funneled to four teams for machine scoring. Raw scores are entered on the test rosters and the rosters forwarded to base statistical services where identifying data and the raw score for each airman are punched into an IBM record card. After receipt of all raw scores, statistical services prepares raw score frequency distributions and conversion tables for each test. The conversion tables are based upon linear transformations of the raw score distributions to standard score distributions with a mean of 100 and a standard deviation of 20. Cut-off converted scores are set at 80 for all 5-level APT's and 90 for 7-level APT's, resulting in failure rates of approximately 15% and 30% respectively. Converted scores are then entered into the IBM cards and rosters of scores by AFSC are prepared for return to test control officers. When rosters of scores are received in the field, Personnel Actions Memorandums are published announcing the scores and entries are made of the score achieved in each examinee's personnel folder.

Once the primary mission of returning scores to the field as quickly as possible is completed, analyses of the functioning of the tests are instituted. In this area may be included test reliabilities, evaluation of test means, sigmas, and failure rates by major air command, and item analysis of new and revised tests which are administered for the first time.

In addition to the above procedures which may be considered to be routine, the processing and analysis workload frequently includes special projects such as the verification of AF JKT scores, and the scoring and tabulation of test data required for the accomplishment of the research studies conducted by the Squadron.

RESEARCH AND EVALUATION

The research conducted on proficiency and job knowledge tests is defined as operational in nature. As such, it is restricted to those projects which are necessary to the maintenance and improvement of the testing program and which provide the solutions to operating problems encountered in test development, administration, processing, or utilization. Examples of the types of problems which have arisen in the normal course of Squadron activities are briefly presented below.

Eighty-five of the first AF JKT's developed were subjected to two general types of validation research:

1. Each test was administered to a group of airmen with one to two years experience in the career ladder for which the test was designed and to a group of airmen without prior experience. The tests proved to be extremely effective in distinguishing these groups in that the inexperienced groups achieved mean raw scores approximating chance success while the experienced groups received average scores ranging between 35 and 50 (total possible raw score—65).

2. The AF JKT's, which are designed for use at the 3-skill level, were administered to groups of 3-, 5-, and 7-skill level airmen in the particular career ladders. The tests again proved to be effective in distinguishing the 3-level groups from both the 5- and 7-level groups. Significant differences, however, were seldom found between the 5- and 7-level groups.

In a more recent study (3), 27 AF JKT's were administered to groups of experienced and inexperienced enlisted Navy personnel. All 27 tests were effective in distinguishing between the two groups and have been recommended as valid instruments for evaluating claimed experience of civilian applicants for the service ratings covered by the tests.

The most common problem faced in test development concerns specialties composed of two or more

shred-outs, where a shred-out identifies particular functions or pieces of equipment within one specialty. The AFS of fire control system mechanic, for example, contains five shred-outs identifying types of fire control systems. Although all five systems are basically similar electrically and mechanically, each type of system involves special intricacies and is constantly undergoing modification to such an extent that it is not considered feasible to train every airman on all types of fire control systems covered by his AFS.

Where shred-outs do exist within an AFS, general practice has been to develop one APT for the specialty. This APT consists of 70 or 80 common items with the remainder divided equitably among the various shred-outs. Special studies with particular emphasis upon failure rates and functioning of both common and specific items are then initiated to determine the effect of this procedure upon the various subpopulations. Where the statistical evidence warrants, several lines of action are possible. Depending upon the specific circumstances involved, recommendations may consist of waiving the test requirement for individual shred-outs, developing separate tests or conversion tables for each shred-out, or using shred-out scoring keys rather than one master scoring key for all shred-outs.

Variations of the shred-out problem may arise when the SMS team advises that there are no common areas of knowledge between authorized shred-outs or that shred-outs actually exist in the field although they are not so described in the specialty description. Under these circumstances, special instructions are included in the Test Control Officer Letter to collect the data needed to evaluate the judgment of the SMS team.

Other types of research projects which have been conducted in support of the test development mission include studies of the efficiency of identical items at different skill levels within the same career ladder; the relative effectiveness of supervisory and technical knowledge items in 7-skill level APT's; and the functioning of non-parallel distracters. Readability formulas have been applied to assess the verbal level of APT's which have proven to be particularly difficult. Future research in this area will probably be directed towards modifications of existing techniques or to the development of readability formulas more directly applicable to proficiency test material.

Surveys and projects are sometimes initiated at the request of field activities. Major air commands which suffer a particularly high failure rate on an APT may desire to know whether there are areas of job knowledge in which its airmen were deficient, or whether individual bases under the command's jurisdiction were contributing disproportionately to the failure rate.

Field units may desire an assessment of training weaknesses for the unit as a whole or for individual airmen within the unit. Although the APT's are not developed as diagnostic instruments, it is felt that they can be analyzed to shed some light on the performance of units but not to diagnose individual training weaknesses.

Another type of operational project was undertaken to determine the feasibility of utilizing proficiency tests in the Air Force Reserve, particularly in the ready-Reserve units. These units are on a regular training schedule to be ready to function as a unit in time of mobilization. During the conduct of the studies conducted in this area, 12 APT's were administered to airmen assigned to 21 ready-Reserve units in the First, Fourth, Tenth and Fourteenth Air Forces. One of the main problems in this study was the prediction of the probable failure rates which would occur among Reserve airmen if the standard score tables and minimum qualifying scores developed on the active Air Force population for each test were applied to the raw score distributions for Reservists.

Regular channels are set up for the exchange of data between the Test Squadron and the Air Force Personnel and Training Research Center (AFPTRC), Lackland Air Force Base, Texas. Shortly after the close of each test administration cycle, decks of machine-record cards containing identifying data and test scores for all airmen taking APT's are forwarded to AFPTRC. After matching these cards against their files, AFPTRC returns to the Squadron decks of cards containing aptitude stanines (Airman Classification Battery). AFPTRC has conducted studies relating predictions made on the basis of aptitude stanines to later performance on the job as this is measured by APT score (2).

SUMMARY

This paper presents a brief description of the Airman Career Program of the United States Air Force with particular emphasis upon the develop-

ment and utilization of paper-and-pencil tests in the assessment of airman proficiency. The procedures used by the 2200th Test Squadron in the development, control, and evaluation of proficiency and job knowledge tests are described in some detail.

GLOSSARY

- Air Force Specialty (AFS)*—a grouping of positions which require common qualifications.
- Air Force Specialty Code (AFSC)*—a combination of meaningful digits used to identify an AFS.
- By-Passed Specialist*—a person who has been awarded the semi-skilled level (3) of an AFS at a processing unit or military training wing based on prior civilian or military occupational experience and schooling.
- Career Field*—a group of related AFS's involving basically similar knowledges and skills.
- Career Field Subdivision*—a division of a career field in which closely related AFS's are arranged in one or more ladders to indicate the skill levels and progression.
- Skill Level*—the level of an awarded AFS which indicates the degree of qualification.

Specialty Description—a description of an AFS which includes the code, title, summary, duties, qualifications, and other specialty data.

Test Control Officer—officer designated on orders at all major air commands and subordinate units as responsible for the control and administration of testing materials.

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PROFESSIONAL ETHICS FOR GRADUATE STUDENTS IN PSYCHOLOGY

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DURING the year 1953-54 the psychology department at Kent State University decided it would be desirable for graduate students to have a course in ethics. The problem of ethics was not only being discussed by psychologists in the Ethical Standards Committee, but students both in and out of school were confronted with practical problems. Frequently they were not aware that there was a problem, and for this reason it seemed that a formal course to sensitize them to higher professional standards was needed. The course was first offered in the spring quarter, 1954, and taught by Benjamin Mehlman. At the time we wondered if this were a unique course as far as primacy was concerned, so an inquiry to the APA office brought the opinion that other courses were already in existence and that a survey to determine the status in this respect would be interesting. Consequently, on April 30, 1954, a questionnaire was sent to 143 schools listed by Moore (3) as offering graduate work in psychology. To date, 125 replies have been received, or approximately a 74 per cent return.

Quite coincidentally, a similar study emanating from the department of psychology of the Walter E. Fernald State School, Waverly, Massachusetts, was also in progress. This latter survey, however, covered only those schools offering the doctorate in psychology. Of 79 questionnaires mailed, 52, or 66 per cent, were returned. Since the two surveys have a good deal in common and supplement each other, the results have been combined. Information was solicited as to (a) whether the department offered a course in ethics; (b) when first offered; (c) any future plans for offering such a course; (d) whether it was a course in professional or general ethics; (e) the name of syllabus or material used; (f) whether a course in ethics was being taught in connection with another course, giving the title of this course; (g) on what level the

course was offered or planned to be offered; (h) whether the course was required or recommended for all majors in psychology or for some specific area only; (i) how, in the selection of psychology majors, the individual's system of values was assessed; (j) which method had proved most feasible or valid; (k) the consensus of the department regarding ethics in the curriculum; and (l) comments, criticism, or suggestions.

Tabulations indicate that there are 12 schools, or 9.6 per cent of all respondents, offering a course in ethics. All indicate that it is on a graduate level. Seven schools offer the course on a required basis. The schools offering a course in ethics are listed below, along with the year the course was first offered.

| Year | School | |
|----------|-----------------------------|------------|
| 1947 | University of Ottawa | (required) |
| 1949 | University of Chicago | (optional) |
| 1950 | University of Maryland | (required) |
| 1950 | Fordham University | (optional) |
| 1951 | University of Montreal | (required) |
| 1952 | University of Utah | (optional) |
| 1951 | University of Kansas | (required) |
| 1953 | Roosevelt College | (optional) |
| 1953 | Boston University | (optional) |
| 1954 | Kent State University | (required) |
| 1954 | Richmond Professional Inst. | (required) |
| "always" | Loyola University, Chicago | (required) |

Recognition of the importance of ethics and its incorporation into a psychology curriculum is a very recent phenomenon, coinciding with the growth of clinical psychology and research on this subject by the APA. Specific courses in professional ethics were first introduced in 1947. Three departments plan to schedule a specific course sometime in the future; four others anticipate a course but are presently uncertain. Tabulations indicate that the most frequently mentioned syllabus used in such courses is the official APA document, *Ethical Standards of Psychologists*, along with other psychological publications, especially the *American Psychologist*. Other materials listed in order of frequency are *Professional Problems in Psychology* by Daniel

¹ Formerly of the Walter E. Fernald State School, Waverly, Mass. The kind assistance of Miss C. E. Chipman, psychologist, is greatly appreciated.

and Louttit, *Manual on Counselor Preparation* by Leonard Miller, *American Journal of Orthopsychiatry, Occupations* and National Vocational Guidance Association, study of basic notions of human rights, case material provided by the teacher, outside speakers, and principles of the Arizona State Psychological Association.

Training in ethics is almost entirely of a specific, empirical, and professional nature. Approximately 36 per cent of the respondents expressed an opinion as to how such training should be handled. The most common opinion is that a course dealing solely with professional ethics is not warranted at this time, and that ethics can be handled best as part of a more inclusive course dealing with professional problems. The discussion of ethics is implicit in a number of courses within the department and throughout the curriculum; e.g., as part of a student's practicum work, as a seminar or colloquium, through special meetings and lectures, invited speakers, Psi Chi, and in courses on mental hygiene and psychotherapy. Some suggest that the course be given on a noncredit basis. A few informants state that the effectiveness of a course in ethics can in some measure be judged by the student's performance in practicum work. In view of the fact that so little is reported in the way of validation, practicum work might well serve as one step in that direction. Six schools suggest a more general course in philosophy. A similar group is frankly skeptical about the value or need for a formal course. Lastly, a few isolated suggestions were offered for handling the problem of ethics. These include a study of the practices of other professional groups, selecting ethical students, teaching ethics best by example, and including questions on APA code of ethics on doctoral preliminary examinations.

By including those schools that offer ethics as part of another course, the Fernald survey indicates that close to 40 per cent consider ethics sufficiently important to be placed on a required basis. When not required for all majors, it is required for clinical psychologists. It was felt that the problem of professional ethics was not so important for departments whose program is oriented toward general or experimental psychology alone.

Both surveys indicate that those departments reporting comparatively little or no training in ethics comprise at least 60 per cent of the total

number of questionnaires returned. The majority in this group specifically state that they have no plans for offering a course in the future. Yet, even in this group there is evidence for believing that professional ethics is being discussed more widely than reported. Although ethics may not be part of the curriculum, one cannot assume that in many cases ethical concepts are not considered or discussed. A few, though a decided minority, teach ethics indirectly, "occasionally" discuss the matter in seminars, recommend readings in conjunction with subject matter, or carry on "a good deal of talk about values" in many courses. It is the formal, systematic, more extensive presentation of the subject that is lacking.

It is common knowledge that although the student's academic record is widely used in the selection of graduate students in psychology, the same effort is not made to assess his value system, largely because valid methods have not yet been devised. Results of the Fernald survey indicate that the effort expended in assessing the student's set of values is commensurate with the status of ethics in the curriculum. For example, 45 per cent of those departments offering no course training in ethics *failed* to indicate the use of any method of assessment as against 19 per cent of those offering such training. The latter group also uses a wider variety of methods. In either case the methods most frequently mentioned are the personal interview, letters of reference, and classroom observations. Next in order of frequency is a group of methods which are traditionally considered measures of academic ability and seem, therefore, out of context here. In this group, the transcript, Miller Analogies Test (MAT), and Graduate Record Examination (GRE) were mentioned. A few departments use a reference rating form of their own. Least common are methods supposedly more suited for measuring values. Those reported were the Rorschach, projective techniques, Minnesota Multiphasic Personality Inventory, Allport-Vernon Study of Values, Strong Vocational Interest Blank, autobiography, letters or telephone calls to former professors, letters written by graduates outlining their plans in professional psychology, application blank, observations in a seminar or practicum work in a clinical situation, and, finally, a course entitled "Controlled Counseling and Controlled Therapy." Very few specified which methods proved most

valid or even feasible, though the interview, classroom observations, and letters of reference were most frequently mentioned in this connection. Although widely used, the limitations of the transcript, MAT, and GRE are recognized, if one is to judge from the fact that only a single department considered any of these methods feasible for assessing values. Telephone calls to former professors and appraisal of success in practicum work, though considered informative, are rarely used. The University of Ottawa reports that the problem of professional ethics has been handled not only as part of other courses, but as a real live issue in its course on "Controlled Counseling and Controlled Therapy." It would be instructive to obtain a more extensive report regarding the essence and effectiveness of this method, which has been found both feasible and valid. In general, almost no validity data are reported, though some of the methods were thought to be "feasible" and "fruitful." One department reports a validity study now in progress, based on a course in professional ethics offered during the years 1948 through 1953.

To the extent that his opinion expressed the consensus of the department, each chairman was asked to check one of several statements expressing attitudes toward the teaching of ethics. Close to 90 per cent of all departments offering at least partial courses answer this question as contrasted to 55 per cent of those who offer no training. The former group most frequently checked the statement that "such courses have demonstrated effectiveness"; the latter group felt that "each psychologist must work out his own ethical standards," and that "the teaching of ethics should be relegated to the department of philosophy." Several of the latter group also felt that there is need for further research; many others abstained from expressing an opinion, probably because "the question has not been considered here." One might conclude that the departments offering training express a more favorable attitude toward the importance and teaching of professional ethics, though often enough they state also that they have no means as yet to evaluate its effectiveness.

In order to offer greater opportunity for the expression of individual opinion than a formal questionnaire affords, comments, suggestions, and criticisms were solicited. Selections from these are quoted verbatim below.

Good to see this aspect of practice evaluated.

There is a great need for the consideration of matters of ethics.

This is the most vital point in our whole training program—to inculcate ethical principles along with professional proficiency.

... I feel strongly that both general ethics and professional ethics should have a more prominent place in the curriculum, and I might predict that in future years we may solve this problem better than we have in the past.

... certainly the problem is of sufficient importance and ethical standards are sufficiently well defined to warrant a systematic effort to indoctrinate our students. Whether this can be done most effectively by means of a course in professional ethics, or by means of context emphasis throughout graduate course work, is not clear at this time.

We have plans for a short orientation course for graduate students which will include some broad discussion of these topics.

We recommend reading *American Psychologist*, etc., on ethics.

I believe that most of us feel that ethics can be taught in conjunction with subject matter, e.g., clinical, industrial, experimental psychology.

Much can be done through informal comments and discussion in their other courses. The most effective method is probably imitation. Hence, it devolves upon the faculty to act in such a way as to be good examples.

Would expect psychologist to be familiar with the APA Code of Ethics. At the graduate level, this does not justify a course.

... for graduate students in psychology, we do acquaint the students with the principles of professional ethics of the American Psychological Association and of the Arizona State Psychological Association. ...

Our clinical graduate students get eight lectures, assigned reading, and numerous informal discussions of ethics in the supervisory setting.

We believe that "selection" (of psychology majors) with respect to ethical standards should be secondary to "training" by example, by practice in real situations, and by opportunity for discussion in the "Professional Problems" course. Ethics are mainly lived, not taught. We place more dependence on the consideration of ethical implications in clinical practice than on didactic teaching. A few periods of student-centered discussion of the APA's *Ethical Standards of Psychologists* appears to have some value, however.

Your questionnaire seems ambiguous. Are you concerned with professional ethics specifically or with general ethics? If you study our calendar, you will see explicit statement made concerning the requirement of general ethics. This is a course in philosophy. The problems of professional ethics have been handled as part of other courses: Psychotherapy, Problems of Counseling, and as real live issues in Controlled Counseling and Controlled Therapy.

This questionnaire is restricted in form. Does not really reach the topic for psychological trainees.

We have a course in this department which treats of the problem of ethics in psychology, and which is described in

two articles (1, 2). This department does not now intend to introduce a course solely on this problem. Our reaction to this general area can best be obtained by reference to the above-mentioned articles.

Don't know whether any relationship would prevail between teaching and practice of ethics.

In view of crowded curricula, we teach professional ethics only in connection with the Colloquium. We request all graduate students to read the APA statement on ethics, and include a question on ethics in the doctoral preliminary examination.

We object to developing courses on a topic alone. Ethics is broad and should be a part of many courses. In a seminar at the graduate level is the best place to discuss such topics.

Our program is exclusively experimental in character, consequently a course in ethics would be of limited value for us. In a department offering graduate training in clinical psychology and for other applied areas, I believe such a course would be valuable. It does seem that such a course should be a required, zero credit course offered at the graduate level.

Since we don't "point" our program toward any applied form of psychology, we have never felt the need to consider the problem of ethics at a formal level. We trust that the students get sound ethical principles through normal contact with the staff and with each other.

Our MA is purely predoctoral, our doctoral program is restricted largely to general-experimental psychology. The ethical side, other than due consideration of sources used in papers, is not as serious for our program as it might be for programs in clinical, industrial, etc.

Most of us believe that only certain kinds of people need to be concerned with their ethical behavior; we wouldn't hire such a person to teach on our staff.

In my opinion, a general course in ethics does not belong in psychology. A course in professional ethics oriented around the functioning of a psychologist strikes me as inappropriate at the undergraduate level since an individual who has completed an undergraduate program is hardly prepared to function at a professional level. An intensive discussion of professional ethics seems of dubious merit. In this department, our advanced graduate students participate in discussions of the adopted code of ethics of the APA, although no formal course is offered. The more subtle aspects of professional ethics become meaningful as an individual becomes increasingly aware of the areas of functioning of the professional worker.

What is so controversial or delicate about this matter? Why should we [that is, offer a course]; this is done in the department of philosophy. Not a matter for specialized course in psychology. Value systems and standards should form frame of reference for all graduate training and be dispersed throughout curricular and other activities.

Why all the concern about courses in ethics for psychologists? I answered another questionnaire last week on the same subject. . . . Better get together with them and pool your findings! Staff opinion here is unanimous that there is no justification for a special course on ethics. Why not deal with the problem of ethics in other courses? This seems quite adequate to us.

SUMMARY

1. Very few departments offer a course solely on professional ethics in psychology though several expressed plans for one in the future. A larger number offer training as part of other courses, feeling that a specific course is not warranted. The majority offer no such training, or at best, very little. Formal scheduled presentation of the subject is widely lacking.

2. Ethics is handled best on a graduate level, in a seminar or colloquium, preferably on a required basis for all students, and definitely so for clinical students.

3. The APA code of professional ethics and journals are the preferred sources of reference.

4. Professional training in ethics is a recent phenomenon coinciding with the APA research in this area and with the rise of clinical psychology.

5. The opinions that ethics is not learned or that it must be left to the individual are more frequently expressed by those departments that offer no training or very little in professional ethics. A good proportion even in this group, however, feel that ethics is important. As more than half of this group explicitly deny any future plans for a course, one might expect greater emphasis on a program of selection. Yet, quite the reverse is true; less concern for assessing the student's "value system" is evidenced.

6. In assessment procedures, greatest use is made of the traditional interview, and letters of references, and least of projective techniques, autobiography, personality questionnaires, e.g., Allport-Vernon Study of Values or opinionnaires.

7. Very few validation data are reported.

8. There is some difference of opinion as to how professional ethics can be best inculcated, didactically or in practice.

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CENTENARY OF PSYCHOLOGY: 1856-1956

CELEBRATION AT WASHINGTON UNIVERSITY, ST. LOUIS

THE year 1956 has a threefold centenary significance for the history of psychology. In 1856 the father of experimental psychology, Wilhelm Wundt, received his MD degree at the University of Heidelberg, and in this same year was born the founder of modern clinical psychiatry, Emil Kraepelin. Kraepelin was a student of the older Wundt, and in his work with mental patients he applied the experimental methods of his teacher. Present-day classifications of mental disorder stem largely from the guidelines established by Kraepelin. Sigmund Freud, explorer of the unconscious and founder of psychoanalysis, was also born in 1856. In the second half of his professional life he turned to the field of psychopathology. Working mainly with neurotic individuals—rather than with normals, as did Wundt, or with psychotics, as did Kraepelin—Freud made notable advances in the understanding of personality dynamics. Thus we find Wundt, Kraepelin, and Freud, in that order, establishing a continuous progression that leads up to the psychology of today.

To mark this important convergent anniversary in the history of behavioral science—experimental psychology, clinical psychiatry, and psychoanalysis—a program under the title "Psychology in Perspective—A Centenary Celebration: 1856-1956" was offered at Washington University, St. Louis, on September 28-29 under the sponsorship of The Oreon E. Scott Foundation.

The program took the form of a symposium consisting of four addresses which were then integrated by a panel discussion. Marion E. Bunch, Chairman of the Department of Psychology at the host institution, presided on Friday afternoon at the opening session. The first address was by Julian Huxley, distinguished biologist and author, under the title "Psychology in Evolutionary Perspective," which served to provide a background for the other contributions by highlighting the developmental emphasis of the science of the past century. E. G. Boring, Pierce Professor of Psychology, Harvard University, and historian of experimental psychology, made the second presentation, "The Role of Consciousness in the Emergence of a Scientific Psychology." The next session, on Friday evening,

was chaired by Edwin F. Gildea, Head of the Department of Neuropsychiatry at the host institution. Winfred Overholser, Superintendent of St. Elizabeths Hospital and Professor of Psychiatry at George Washington University, Washington, D. C., gave the third address, "Organic Order from Mental Disorder." The final paper, "The Cultural Matrix of the Unconscious," was by Saul Rosenzweig, Professor of Psychology, Departments of Psychology and Neuropsychiatry, Washington University. The third and last session followed on Saturday morning—a panel, under the rubric "Trajectory," in which the four speakers and the session chairmen participated.

Summaries of the four addresses follow. The symposium, including the panel, will serve as the basis for a forthcoming volume, "Psychology in Perspective—Review and Preview," to be published by Harper in 1957.

* * *

PSYCHOLOGY IN EVOLUTIONARY PERSPECTIVE

JULIAN HUXLEY

Since 1859 evolutionary biology has influenced the course of psychological research at a number of specific points. However, its major effect has been a general one. It has enabled psychologists to look at their subject in a new and much enlarged perspective. In the first place, it makes it impossible to maintain a radical dualism as between mental and material events in the body. These are two aspects of a single real process. Since evolutionary continuity is complete, the simplest organisms must have mental (mind-like or "mentoid") properties too. With increasing complexity, the mental properties of organisms can become intensified and diversified, and must be presumed to play an increasingly important biological role. But since terms like *mind* and *mental* have various undesirable con-

notations, it is best to drop them and to speak of *awareness*. Psychology in the customary sense can then be regarded as part of the general study of awareness and its evolution.

Awareness as a general property of organisms involves both material (bodily mechanism) and mental (subjective experience) aspects. It should be scientifically approached from two opposite directions: upwards, from its material basis, and downwards, from subjective experiences. The study of awareness always demands qualitative interpretation, in terms of the different properties of experience (sensory, emotional, cognitive-intellectual, etc.). Quantitative analysis of the material mechanisms, or of the resultant behavior, is necessary but is not sufficient for fully effective interpretation. Since what is biologically significant is the working awareness-system as an effective organ-system of the animal, reductionist analysis is an unscientific procedure.

During evolution, natural selection always promotes certain general trends: towards the emergence of novelty, the increase of variety, and a rising upper level of biological efficiency and organization. Higher organization involves both increased complexity and greater integration. Living substance thus realizes new possibilities during evolutionary times. These trends are discernible in the evolution of awareness as well as in that of bodily structure or physiological function. A truly evolutionary psychology thus includes a study of the way in which new possibilities of awareness are in fact realized, and also of the limitations on their realization.

Instincts are behavior patterns with primary genetic determination, the awareness components of which have been adjusted by selection to deal with the chief types of situation likely to confront the species. They constitute a limited number of built-in mechanisms. Learning, on the other hand, provides a means for integrating the individual's experience into its awareness-system. Effective learning depends on specific types of brain organization. Its effectiveness and limitations in particular cases can be experimentally studied.

The small size of insects imposed an evolutionary restriction on their capacities for learning. Accordingly, they have had to rely more on instinctive behavior which in them reaches its highest and most peculiar manifestations, e.g., the "language" of bees, direction-finding in ants, etc.

There are two evolutionary prerequisites for a high organization of awareness involving the incorporation of individual experience by learning: (1) a long youth period, permitting "education"; (2) homothermy, permitting greater uniformity and continuity of awareness. Prerequisites for the further organization of the awareness-system, to enable it to incorporate experience from other individuals and from past generations, are (1) social life, (2) the capacity to organize awareness in the form of concepts, (3) true speech. These have permitted the evolution of the unique type of awareness-system found in man.

In general, awareness-systems have effective properties that are closely adapted to normal biological needs. However, they may contain various possibilities that are not so adapted. These latter properties confer on life the potentialities of new achievements in the organization of awareness though they will be realized only in suitable conditions. The development of art in certain cultures and the development of higher mathematics in others are positive examples, while the disorganization of awareness by exposure to restricted stimulus-situations illustrates a negative effect.

Only by approaching their subject matter from an evolutionary standpoint—by studying the range of the possibilities of awareness, the methods by which these have been realized, and the restrictions on their realization—can psychologists hope to qualify for their most important task. This task is, in my opinion, to assist the development of man's awareness so as to promote his psychosocial evolution. This end will be achieved by building more effective and satisfying social awareness-systems and by fostering more and fuller possibilities of individual awareness and fulfillment.

* * *

THE ROLE OF CONSCIOUSNESS IN THE EMERGENCE OF A SCIENTIFIC PSYCHOLOGY

EDWIN G. BORING

Cartesian dualism fixed upon psychology the conception of consciousness as an immaterial some-

thing that is associated with the brain and yet takes up no space within it. This view still exists in common sense and it favors a nonspatial conception of consciousness, like a functional relation.

Empiricism, beginning with John Locke, made sensation and sensory contents the paradigm for what consciousness is. It also supported a functional notion of the nature of consciousness and sensation, since sensation appears as the means of communication between the inner and outer worlds, the two worlds of Descartes' dualism.

Philosophers said that consciousness, being immaterial, cannot be experimented upon, but the fact was that the sense-physiologists were already conducting important experiments upon sensation, the typical representative of insubstantial consciousness.

Wundt, seeing that consciousness had already submitted to experimental control at the hands of the physiologists, founded what he called *physiological psychology*. The act of founding a science is a prolonged and elaborate affair, but, after the first forty years of his endeavor, it was clear that he had succeeded.

Wundt defined psychology as immediate experience, a definition which ought to mean that introspection is self-validating and cannot lie. Nevertheless Wundt believed that laboratory subjects need careful training in introspection, and presently it became clear that this training limited the protocols of the introspectors to the reporting of sensations, images, and feelings. The perspective of history seems to indicate that Wundt erred in thus restraining the scope of introspection.

Kölpe, Wundt's pupil, undertook at Würzburg to obtain the introspective account of thinking. He found that thinking is characterized by unconscious predetermination, the set or *Aufgabe* with which a problem is attacked. He also found that laboratory observers can report on nonsensory knowledge as inherent in thinking, and he thus included in his conception of consciousness items which he called *impalpable awarenesses*.

Titchener, another pupil of Wundt's and a friend of Kölpe's in the early days, supported Wundt's view of introspection, restricting the laboratory protocols to a straight description of consciousness, which under his training meant the reporting of Wundtian sensations, images, and feelings. He warned against the stimulus-error, by which he meant the making of statements about physical objects. Later, to combat the conclusions

of Kölpe's school, he proposed his context theory of meaning, which allowed for the existence of unconscious meanings in the case of familiar perceptions.

Presumably Titchener's unconscious meanings can be identified with Kölpe's impalpable awarenesses, and both of these items, being meanings or knowledges, appear to be the same as Locke's ideas or James' conscious contents.

Actually Titchener's notion of unconscious meaning depends for its scientific status on the observation of behavior. When introspection fails, only behavior is left, and indeed, as later behaviorists showed, introspection itself is verbal behavior. So it turns out that behaviorism provides an excellent medium for the study of consciousness, of discriminations, and of unconscious meanings. This result is implicit in Titchener's theory but by no means explicit. E. B. Holt first made it explicit, and Tolman then developed the conception to what may be regarded as an accepted view in modern American behavioristics.

Thus psychology can still be regarded as the study of consciousness, awareness, or knowledge which the individual has. In this primary respect the discipline is continuous from Locke to Wundt, and, through Kölpe and Titchener, through Holt, Tolman, and other behaviorists, to modern psychology's American theater of action.

* * *

ORGANIC ORDER FROM MENTAL DISORDER

WINFRED OVERHOLSER

Wundt was not only the founder of experimental or physiological psychology; he exerted a profound and lasting influence upon Emil Kraepelin, the great psychiatric observer, describer, and systematizer. It was because of Wundt, indeed, that Kraepelin turned as a student from philosophy to medicine, and he retained an active interest in Wundt's psychology throughout his life.

It was almost inevitable that Kraepelin should be organically oriented in his approach to the problems of mental disorder. In the first place, the

tradition of both the French and German schools was in favor of attributing mental disorder to heredity, to "dégénérescence," or to brain damage of some obscure sort. Again, the prevailing "Naturwissenschaft" emphasized the observation and measurement of data, as opposed to the earlier philosophical or theological approach. Wundt exemplified this attitude in his work, and Kraepelin was a devoted pupil.

Kraepelin, however, was far more than an echo of the great psychologist. He was a tireless worker, and a painstaking observer and recorder of the symptoms of his patients. He found the numerous previous classifications of mental disorder confused, confusing, and unscientific, and set himself to establishing a system of "disease entities" (not unlike Linnaeus' then recent classification of plants), using general paresis as a paradigm. His most significant contributions were the concepts of dementia praecox, manic-depressive psychosis, and paranoia. His basic error, however, was in assuming the existence of clear-cut entities, and in assuming that the diagnosis could be established on the basis of prognosis. As a result, perhaps, of his training with Wundt, he shrank from the dynamic aspects of the dementia praecox concept.

The organistic and essentially fatalistic system of Kraepelin was illuminated and vivified by its elaboration at the hands of Bleuler and Jung. It was they who first injected into clinical psychiatry the dynamic application of Freud's ideas. Bleuler enlarged the idea of a dementing process of almost inevitable outcome and probable organic basis to that of a splitting of psychic functions, and he introduced the concepts of autism, ambivalence, and complexes. He likewise opposed Kraepelin's idea of dementia praecox as a disease process with a single cause. Later, however, Bleuler veered somewhat more to the organic side, as opposed to the psychological.

A more inclusive approach to the problems of mental disease was proposed by Adolf Meyer under the term "psychobiology." He proposed the concept of habit deterioration, and added to Kraepelin's emphasis on course and symptoms the importance of what had gone on in and to the patient before the onset of his symptoms. He emphasized "reaction types" as opposed to "disease entities," a stand reflected in the current classification.

Thus Bleuler, Jung, and Meyer added to the Kraepelinian structure and modified it substantially.

The fact remains, however, that even our present-day classification of psychiatric disorders, complicated and cumbersome though it may be, has been greatly influenced by the genius of Kraepelin, and that for at least the first quarter of the present century American psychiatry was basically Kraepelinian.

* * *

THE CULTURAL MATRIX OF THE UNCONSCIOUS

SAUL ROSENZWEIG

Psychoanalysis as a psychology of the unconscious is derivable from the personal culture of Freud the man, the socioeconomic culture of late nineteenth-century Europe, and, finally, from the contemporary intellectual culture.

The life of Freud strikingly exemplifies the interaction of ability and disability in the creative process. The manner in which he transcended in his work the frustration of his personal neurosis, and yet preserved the traces of his illness in the product, sheds important light on the nature of creativity as well as on the origin and intent of psychoanalytic theory.

The general socioeconomic situation of late nineteenth-century Europe is articulated in the theories of Freud which are therefore to some extent localized in their application. The specific culture of Vienna with its violent political contests of the 1890's precipitated in Freud many of the concepts now called Freudian. There is evidence that by his peculiar sensitivities, both positive and negative, Freud was especially attuned to the problems of his social world—the very world that had largely created his personal problems. What followed was an attempt at a double, i.e., personal-social, solution.

The intellectual atmosphere of the time, as represented both by the sciences and the humanities, contributed the conceptual tools for this solution—for the shaping of psychoanalysis. From physics and physiology, notably from Helmholtz, the idea of mechanistic *determinism* derived. From biology the theory of evolution imparted the strongly *developmental* character of psychoanalysis. Medi-

cine, burgeoning into bacteriology with its central concept of body defense, inspired that of ego defense. French psychopathology was examining personality *dissociation* and as a complement psychology contributed the *association* method. Galton's experiments on word association, which he explicitly recognized to have remarkable autobiographical significance, were repeated and extended by Wundt and his students, including Kraepelin; were modified by Freud for therapeutic purposes, and thence continued into the classical studies of Jung. The method of *reconstruction* that the newborn science of archaeology had developed was combined by Freud with the association technique of Galton to produce the free-association method which is just such a combination of psychology and archaeology. From archaeology also came the idea of cultural layers, newer strata of artifacts being deposited on older ones—an insight that Freud applied by analogy to the layers of conscious, preconscious, and unconscious personality.

The humanities, especially literature and philosophy, also engendered powerful influences. Working in the realm of both the sciences and the humanities, Goethe had left his imprint on every aspect of European thought. Freud was imbued from early youth with Goethe and the libido theory is largely traceable to this source. French romantic-realism, as in Flaubert and Zola, exerted a contemporary pressure that reinforced the Goethean strain while at the same time contributing a distinctive note of disillusionment. Under the guise of an assertive realism this literary movement betrayed a poignant yearning for the past which indicated its romantic provenance—a two-tone cast that is equally discernible in Freud's *Weltanschauung*. The voluntaristic philosophy of Schopenhauer, Hartmann, and Nietzsche gave vogue to the

notion of the Will and the unconscious—the overwhelming irrational basis of human experience that finally became for Freud the Id.

The emergence of psychoanalysis at the turn of the century is thus a fascinating instance of the creative process. Late nineteenth-century Western culture was ready for self-conscious awareness—for a reaction against a pervasive overlay of self-deception and repression. The sciences and the humanities had prepared the necessary concepts. Freud with his neurotically heightened sensitivity and his highly developed gifts of self-observation and verbal expression became, like other “geniuses,” a vehicle of his time and place. To point up the mutual dependence of his strengths and weaknesses, of his indebtedness and his achievement, is truly to appreciate him.

But there is a second sense in which the cultural matrix of the unconscious should be considered: the unconscious as a construct is perhaps culturally constituted. For orientation some criticism of Freud's views is required. The same forces that gave to psychoanalysis its birth and viability left inevitable features of limitation. Freud's uncritical view of “reality” and his failure to distinguish the individual as a biological organism from the person-in-the-culture led him to an excessively individualized view of the unconscious, including unsupported beliefs in biologically determined libido stages, inherited primal fantasies, etc. While the individual-biological dimension of the unconscious cannot be disregarded, it is essential now to take fully into account the personal-cultural dimension as well. One possible outcome would be to hypothesize the “cultural unconscious” according to which the unconscious would be less a matter of individual *Aufgabe*, more a concept of cultural continuity.

Comment

A Volume-Year Check List of Psychological Journals

The recent comment by Harry Ruja regarding citation errors in psychological literature (*Amer. Psychol.*, 1955, 10, 306-307) calls attention to a number of problems associated with bibliographic references. Current APA policy regarding citations requires, for example, the inclusion of both year and volume number. This procedure is becoming increasingly complex as the number and issues of psychological journals continue to multiply.

This complexity might be allayed somewhat with the help of a volume-year cross-reference work for those writing for and reading in the journals, as well as for editors and bibliographers. To the writers' knowledge, no reference work of this type has been available since E. S. Conklin's early publication (*Univer. Oregon Publ., Psychol. Ser.*, 1931, 1, no. 2).

A volume-year check list for 125 of the major psychological journals has been compiled by the writers. The data are presented in tabular form, providing information regarding the volumes published through 1954 under a journal title and the year in which each volume appeared. Thus, with either volume number or date known to the user, the other figure can be determined from the table. Also included in the list are indications of title changes, dates of cessation, and periods of suspended publication.

One hundred mimeographed copies of the check list have been prepared by the Department of Psychology, University of Missouri, Columbia, Missouri, and are available to anyone interested in receiving this reference work.

JEAN EASON AND ROBERT S. DANIEL
University of Missouri

No Comment

2 March 1955

(Publishing House)

Gentlemen:

We are calling upon you for help in supplying us with some information which will be used in our procurement of textbooks. As you know, agencies of the federal government are required under present appropriation acts to ensure that government funds are not paid to individuals who are considered security risks to the United States.

It is necessary that authors of textbooks used by USAFI be subject to a national agency check. We are, therefore, asking you to supply identifying information for (here followed the names of contributors), contributors of _____, which we are considering for procurement for this fiscal year. We would ap-

preciate it if you would provide us with what information you can on the enclosed forms.

If the authors are deceased, if their whereabouts are unknown, or if they receive no royalties from you, please indicate this on the form.

We indeed appreciate your kind help and cooperation in the past and please be assured that if USAFI may be of any service to you, we shall be happy to do so.

Sincerely,
(USAFI)

March 9, 1955

Dear Professor —:

In mid-February we had a letter from the United States Armed Forces Institute requesting a quotation on 2,000 copies of a USAFI edition of _____ and I immediately made a quotation.

For your information, we supply many titles to USAFI and this has been reasonably profitable both to us and to our authors. Only within the past year have we been asked for a security check and I believe this is something fairly new. In each case we have sent the form along to the author and he has supplied us with the information.

In quoting on _____ it had not occurred to me that a security check on all the contributors would be demanded. However, as they have asked for this, I am sending the forms along to you for your distribution to the people concerned, should you decide this is advisable. If you do acquire the requested information, will you return the completed forms to me and I will forward them.

Sincerely yours,
(Vice President—Publishing House)

March 15, 1955

Dear Mr. — (Vice President—Publishing House)

Thank you for your letter of March 9. I do not believe that it would be fitting to request my contributors to provide the information required for purposes of subjecting them to a "national agency check." My reasons for so deciding are simple. I believe that a book should be judged by its content and by its professional competence rather than by the past of its contributors. The implications of the USAFI request are disturbing. To ensure wide sales and royalties a publishing house would have to screen its editors, the editors the contributors, and the contributors their fellow contributors. In short, the publishing house, the editor, the contributor, in addition to their regular jobs, would become investigators!

I had wondered whether I was obligated to poll my contributors with regard to this issue. However, since

unanimous agreement is required, and since I for one have definite objections, such polling would be only an empty gesture.

I assure you that the royalties on such an order would appeal to me. But frankly I would not ask my contributors to subject themselves to the embarrassments and misunderstandings that accompany modern loyalty checks.

I am sending a copy of the USAFI letter, your letter, and my reply, to each contributor so that they may be informed of the situation.

Yours sincerely,
(Professor —)

March 31, 1955

Dear Mr. — (USAFI):

This is in reference to your letter of March 2, concerning our textbook, edited by Professor —.

I note that you ask for identifying information for the contributors as well as for the editor, but I also note the statement "or if they receive no royalties from you."

Our arrangements are entirely with Professor — and any royalty earnings on the book are being paid to him. We have no information as to what arrangements Professor — had made with his contributors. Under these circumstances is it necessary to supply the identifying information for the contributors as well as for the editor?

Thank you for any clarification you can give me on this.

Sincerely,
(Vice President—Publishing House)

4 April 1955

Dear Mr. — (Vice President—Publishing House):

Thank you for your letter of 31 March 1955 concerning the textbook edited by Professor —.

We believe that it will not be necessary to supply identifying information for the contributors involved inasmuch as you have indicated that they do not receive any royalties from you. However, if something should come up later that this information will be needed, we shall let you know.

Your kind help and cooperation in this matter is sincerely appreciated.

Sincerely,
(USAFI)

April 6, 1955

Dear Professor —:

Your letter of March 15 reached here during my absence, but upon my return, and on the basis of your letter, I decided to write USAFI. Enclosed is a copy of my letter to them of March 31 and a copy of the reply received from them today.

In view of USAFI's interpretation, I assume that you will have no objection to supplying the requested information as concerning you only.

Sincerely Yours,
(Vice President—Publishing House)

April 13, 1955

Dear Mr. — (Vice President—Publishing House)

Thank you for your letter of April 6. Frankly I am rather puzzled. At first USAFI required "clearance" of my contributors and myself. For reasons indicated in my previous letter I did not believe this dignified and was unwilling to provide information requested by USAFI. Now it appears that "clearance" of the editor only is needed—even though he has not written a single chapter of the text. I am also somewhat disturbed by USAFI's sentence, "However, if something should come up later that this information (concerning the clearance of the contributors) will be needed, we shall let you know."

The principle mentioned in my last letter to you still applies: should USAFI be concerned with the professional competence of the book's contributors and its editor, I should be only too glad to obtain the necessary *curricula vitae*. However, I do not propose to subject either my contributors or myself to modern-day clearance procedures.

Yours sincerely,
(Professor —)

April 19, 1955

Dear Professor —:

Mr. — (Vice President, Publishing House) has asked me to write you that he has received your letter to him of April 13 and that he will be writing you later, but in the meantime will you please return to him the USAFI forms which he sent to you with his letter of March 9. Enclosed is a self-addressed stamped envelope for your convenience.

Sincerely Yours,
(Secretary—Publishing House)

The above correspondence remains anonymous¹ inasmuch as clearance of contributors is the central issue and little is gained by indicating names of authors, publishing house (well-known), text, or editor. In the time intervening between the receipt of the above material and its being submitted for publication, letters of support have been received from 53 per cent of the contributors (it should be noted that the correspondence did not require a reply).

(PROFESSOR —)

¹ The *American Psychologist* does not ordinarily publish anonymous contributions, but in this case it was decided to make an exception to the general policy.—Ed.

Psychology in the States

In each issue this section will be devoted to reports of activities being carried on by various state and local groups as well as brief articles and comments concerning state and local organizations.

Officers, editors of newsletters, and public information chairmen of local, state, and regional groups should send any contributions to this section to Dr. John W. Gustad, University of Maryland, College Park, Maryland.

* * *

CSPA and APA Structural Reorganization

The members of the American Psychological Association will note soon a tremendous increase in the volume of words, spoken and written, relative to the structural organization of APA. This fact is pin-pointed by two documents which were presented for discussion at the recent Chicago meeting of APA.

APA Policy and Planning Board through its members and Chairman-elect Edwin B. Newman discussed its "Working paper for discussion of the organization of APA" with the various APA Divisions and with the Executive Committee and delegates of the Conference of State Psychological Associations. This document stressed for consideration the matter of decentralization of APA by handing over to state associations problems dealing with legislative and ethical matters. A Council-appointed Board of Professional Affairs would serve as a planning and executive agency. The states would be represented on APA Council through representatives elected by the states in terms of the number of APA members in the state. CSPA would be abolished.

The CSPA Policy and Planning Committee, composed of A. W. Combs, K. K. Loemker, J. E. Moore, G. S. Speer, M. C. Langhorne, Chairman, presented its report for discussion. This document highlighted also the idea of involving the states more actively in APA matters stressing especially legislative, ethical, membership affairs. The report emphasized that CSPA is composed of delegates elected by the states; that its membership is more widely distributed geographically than APA Council and should, therefore, be more sensitive to local

needs and problems than Council or a Council-appointed Board.

The CSPA report proposed for consideration several alternative forms of structural relationships with APA: (1) continue the present setup but grant to CSPA more responsibility in providing leadership to the states in assuming their rightful roles in psychological areas of local significance; (2) increase CSPA representation on Council to allow it to speak more adequately for the "grass-root" member; (3) the inauguration of changes in APA structure so that the states be represented more adequately in the areas dealing with professional problems.

The CSPA report asked for consideration also for: (1) joint meetings of APA and CSPA Policy and Planning groups to discuss problems of change in APA structure involving states and CSPA; (2) a study with APA of procedures for supporting the states in handling matters dealing with professional problems to be supervised by CSPA; (3) the establishment within CSPA of a Committee of State Examining Boards.

It is the hope of the Executive Committee of the Conference of State Psychological Associations that the Executive Committee of each state psychological association will study carefully these two documents which will be mailed to them shortly. CSPA urges that the various alternatives for restructuring APA become a matter of urgent consideration at state meetings in the light of their relation to state and national needs in psychology. Ideas generated by these discussions should be communicated to the Chairman of the CSPA Policy and Planning Committee, M. C. Langhorne, Box 2, Emory University, Georgia.

CSPA requests that APA Board, Council, P & P Board delay presenting any changes in APA structure for final vote for a period of at least two years so that expressions from the state associations and individual APA members can be gathered and studied.

* * *

On June 9, the Hawaii Psychological Association held its annual all-day meeting at the University of Hawaii. Principal speakers were Lau-

rence H. Snyder, President-elect of AAAS, discussing "Genetic Variability and Human Behavior"; George F. Harding, "Psychologists in the Armed Services"; and Reuel L. Fick, "Psychology in India and Pakistan." Papers relating to research, theoretical concerns, and community services were presented. The meeting ended with an evening banquet honoring Stanley D. Porteus, pioneer in the field of intelligence and clinical testing. New officers are: President, John M. Digman; President-elect, George F. Harding; Secretary-Treasurer, Ruth Iams; Delegate to the Conference of State Psychological Associations, W. Edgar Vinacke.

* * *

The recently elected officers for 1956-57 of the **Group Psychotherapy Association of Southern California**, who are members of the APA, are: Arthur Lerner, President; Sydney Kessler, Treasurer; Belle Dubnoff, Corresponding Secretary; Don D. Prosser, Recording Secretary; Louis Booth, Membership Secretary; Anna Brind, Arrangements; Charlotte Buhler, Community and Professional Relations; Morse P. Manson, Program; George R. Bach, Research; Dorothy W. Baruch, Standards and Ethics; and Louis Sparer, Past President.

* * *

New officers of the **Indiana Psychological Association** are: Eston J. Asher, Purdue University, President; Charles C. Josey, Butler University, Vice President; and Barron B. Scarborough, DePauw University, Secretary-Treasurer.

The **Tennessee Psychological Association** will hold its annual meeting on November 16 and 17 at Southwestern College in Memphis.

Milton Addington was appointed to the Board of Examiners in Psychology for a five-year term, effective July 1, to succeed Louise W. Cureton, an original member of the Board, whose term of office expired on that date. The appointment was made by Governor Clement from a list of nominees submitted by the Tennessee Psychological Association.

Other current members of the Board of Examiners in Psychology are: Julius Seeman, Peabody (Nashville), Chairman; J. M. Porter, Jr., University of Tennessee (Knoxville); Alfred D. Mueller, Kennedy VA Hospital (Memphis); George D. Copple, Vanderbilt (Nashville).

The present officers of the **Tennessee Psychological Association** are: President, E. Llewellyn Queener, Southwestern (Memphis); President-elect, Leland E. Thune, Vanderbilt (Nashville); Secretary-Treasurer, J. M. Porter, Jr., University of Tennessee (Knoxville); Delegate to the Conference of State Psychological Associations, William J. von Lackum, Gailor Psychiatric Hospital (Memphis).

* * *

The **International Council of Women Psychologists** has published and is making available as a gift to all state regional associations their publication, *A Handbook for Newsletter Editors*. Copies may be obtained by writing the Secretary of ICWP: Dr. Gertrude Reiman, Milwaukee County Guidance Clinic, 515 Safety Building, Milwaukee, Wisconsin.

Psychological Notes and News

Theodore G. Stelzer, of Seward, Nebraska, died August 11, 1956.

Pandharinath Prabhu, until recently head of the psychology department at the Tata Institute of Social Sciences, Bombay, has now joined the Unesco Research Centre at Calcutta, India, as the Senior Research Officer. The Centre has been recently established by Unesco, in pursuance of a resolution of the Eighth General Conference, to study the social implications of industrialization in member countries of South Asia. The Centre realizes that social problems need to be attacked by a team of social scientists from different disciplines working together in order to be able to obtain a clear and realistic picture of their causation, and therefore it plans to have on its staff psychologists, social anthropologists, economists, political scientists, and others, as full-time members and as fellows. The activities of the Centre will be carried out in close cooperation with the universities and research institutes in the South Asia countries. Among the projects to be given priority by the Centre are "psychological, cultural, and social factors affecting productivity," which is being undertaken jointly with the International Social Science Council, "social aspects of development of small-scale industries," and "the impact of rapid economic changes and their effects on law and custom." In addition, the Centre will have a documentation service and will publish a bulletin of information of current research in the region periodically. The Government of India has offered to be the host for the Centre, and the premises called "Emerald Bower," a former mansion of Tagore family on the Barrackpore Trunk Road, Calcutta, has been reconditioned and placed at the disposal of the Centre. The address of the Centre is: Unesco Research Centre, P. O. Box 242, Calcutta, India.

Franklin V. Taylor has returned from 14 months at the Applied Psychology Research Unit, Cambridge, England, to resume his position as head

of the Engineering Psychology Branch of the Naval Research Laboratory in Washington, D. C.

Katharine Cobb left New York for Johannesburg in September to spend six months in the Union of South Africa at the invitation of the South African Council for Scientific and Industrial Research, and with the assistance of a grant from the Carnegie Corporation. She will train local staff members in the special techniques of studying the behavior and development of infants and young children, in connection with an interdisciplinary research program inquiring into the factors influencing the physical and psychological health and development of Bantu families. The study has been undertaken by the National Institute for Personnel Research, directed by Simon Biesheuvel.

Gilbert E. Teal, a recent graduate of the Air War College, has been assigned as Deputy Commander for the Air Force Personnel and Training Research Center, Air Research and Development Command, Lackland Air Force Base, San Antonio, Texas.

Robert E. Bills has been appointed chairman of the psychology department at Alabama Polytechnic Institute, Auburn, Alabama. His address will be School of Education in that institution.

Lowell M. Schipper has joined the staff at Kansas State College where he will be responsible for the work in experimental design and measurement. He formerly was a research associate in the Laboratory of Aviation Psychology, Ohio State University. E. Jerry Phares has been promoted to assistant professor and Donald Hoyt has been designated associate director, Student Counseling Center, in charge of the student personnel research program.

Jesse E. Gordon, who completed his doctorate in the area of clinical psychology at Pennsylvania State University in the summer of 1955, has been appointed lecturer in psychology on a U. S. Public Health Service grant to the University of Wisconsin, Psychology Department.

Laurence E. Saddler, of Ann Arbor, Michigan, has been elected to full partnership status in William, Lynde & Williams, whose main offices are in Painesville, Ohio.

Rohrer, Hibler & Replogle announces the appointment of four psychologists to its staff effective September 1, 1956. Eugene H. Barnes will be located in the Chicago office of the firm, Joseph M. Latimer in the Dallas office, John P. McNulty in the New York office, and Robert G. Wilson in the Cleveland office.

Stanley C. Grzeda has resigned from the RAND Corporation, Santa Monica, California, to accept a new position as Training Supervisor for Hughes Tool Company, Aircraft Division, Culver City, California.

Hubert H. Clay has been named manager of employee training for the Babcock & Wilcox Company in New York City. He will be responsible for promoting and coordinating employee training and management development activities in all divisions of the company.

The Personnel Laboratory, Inc., has appointed Saul W. Gellerman as director of Psychological Services. Marguerite Saltzman, formerly senior psychologist at the Institute of the Pennsylvania Hospital, has joined the staff as senior staff psychologist.

Earl E. Swartzlander and **Albert W. Heyer, Jr.**, formerly on the staff of Rohrer, Hibler and Replogle, have announced the formation of their partnership and the opening of offices in Denver, Colorado, to serve as psychological consultants to management in the Rocky Mountain Area.

Jerry Hirsch, National Science Foundation postdoctoral fellow at the University of California, Berkeley, 1955-57, has joined the Psychology Department at Columbia University as assistant professor of psychology.

Leonard Pearson has been appointed director of the Counseling Center at the Central YMCA of Chicago. The YMCA is expanding its Counseling Center services to include psychological, vocational, and speech evaluations, as well as psychotherapy, vocational counseling, and speech therapy.

Correction. Dean J. Clair has accepted appointment as instructor in the Stanford University Medical School, San Francisco, California.

George Soloyanis, formerly Director, Community Services, South Carolina Mental Health Commission, has resigned to take a position as Chief Psychologist, Bureau of Mental Health, Pennsylvania Department of Welfare. Carl Bramlette, formerly Chief Psychologist, Richland County Mental Health Clinic, has resigned to take a new position as Coordinator of Mental Health Education, South Carolina Mental Health Commission. Sidney Dean, formerly at the University of Portland, is now Chief Psychologist of the Darlington-Florence Mental Health Clinic.

Charles D. Smock has resigned his position at the Iowa Child Welfare Research Station to assume the duties of Director of the Research Department, The Child Study Center, Institute of the Pennsylvania Hospital, Philadelphia, Pennsylvania.

Horace F. Stewart, formerly assistant psychologist at the Raleigh, North Carolina, State Hospital, has joined the staff of the psychology department at the Florida State Hospital, Chattahoochee, Florida.

Jesse H. Harvey has transferred from the Ohio Penitentiary and is a staff psychologist at the Columbus State Hospital.

The Department of Psychology at **North Carolina State College** has added three members this fall: Howard G. Miller, Professor and Head of the Department; William B. Askren, Assistant Professor and Director of the Bureau of Industrial Psychology Services; and Marjorie Davidson, Instructor.

Zelda S. Klapper, assistant professor, Department of Psychiatry, State University Medical College, New York City, has been appointed research and clinical psychologist at the League School for Emotionally Disturbed Children in Brooklyn, New York.

The **Norfolk State Hospital** announces the appointments of Alexander A. Wylie as clinical psychology fellow and Fred J. Pesetsky and Robert McCarter as clinical psychology trainees. The supervisory staff includes Walter G. Klopfer, Gordon Filmer-Bennett, and Joseph S. Hillson.

Anita F. Lyons, Director of Reading and Psychological Services at Island Trees Public Schools, conducted the Island Trees Summer Reading Centers for the elementary and high school students of this Long Island, New York, school district. Two hundred registered students, four teachers, one psychologist, and one clerk work together in the program. On Visitors Day, 51 per cent of the pupils' parents visited and participated in the program.

VA DEPARTMENT OF MEDICINE AND SURGERY
ANNOUNCEMENTS

Clinical Psychology Division

H. Robert Albrecht has been designated Chief Clinical Psychologist, VA Hospital, Chillicothe, Ohio.

Irving Barnett has been appointed to the staff of VA Regional Office, Brooklyn, New York.

Edwin M. Berdy has resigned from the staff of VA Regional Office, New York, New York.

Henry J. Bessette has resigned from the staff of VA Hospital, Marion, Indiana.

V. Edwin Bixenstine has resigned from the staff of VA Regional Office, Indianapolis, Indiana.

Robert W. Cartwright, formerly on the staff of VA Hospital, Roseburg, Oregon, has been appointed to the staff of VA Center, Los Angeles, California, NP Hospital.

George Charnes has resigned from the staff of VA Regional Office, Cleveland, Ohio, to accept a position with U. S. Naval Hospital, Philadelphia, Pennsylvania.

Charles A. Dailey III has resigned from the position of Chief Clinical Psychologist, VA Hospital, St. Louis, Missouri, to accept a position with George Fry and Associates in Chicago.

Kenneth S. Davidson has resigned from the staff of VA Hospital, Marion, Indiana.

William R. Dobson has resigned from the staff of VA Hospital, Fort Douglas Station, Salt Lake City, Utah, to accept a position with Rand Corporation.

Leon J. Goldberg has resigned from the staff of VA Hospital, Butler, Pennsylvania.

David S. Goodenough has transferred from the staff of VA Hospital, Leech Farm Road, Pittsburgh, Pennsylvania, to the staff of VA Hospital, Brockton, Massachusetts.

A. J. Jernigan has transferred from the staff

of VA Center, Waco, Texas, to the position of Chief Clinical Psychologist, VA Hospital, Dallas, Texas.

Karl J. Kadlub, a graduate of the VA Training Program, University of Illinois, has been appointed to the staff of VA Hospital, Battle Creek, Michigan.

Augustus Lewis has been appointed to the staff of VA Center, Dayton, Ohio.

Leonard Lipton, formerly with the Child Guidance Service, Lexington, Kentucky, has been appointed to the staff of VA Hospital, Lexington, Kentucky.

Thomas McGehee, a graduate of the VA Training Program, Michigan State University, has been appointed to the staff of VA Hospital, American Lake, Washington.

Manfred A. Meier, a graduate of the VA Training Program, University of Wisconsin, has been appointed to the staff of VA Center, Wood, Wisconsin.

Mildred B. Mitchell has transferred from the position of Chief Clinical Psychologist, VA Center, Dayton, Ohio, to a special assignment on the Tuberculosis Service in that hospital.

Carl E. Morgan, a recent graduate of the University of Houston, has been appointed to the staff of VA Hospital, Knoxville, Iowa.

Harold R. Musiker has resigned from the position of Chief Clinical Psychologist, VA Regional Office, Providence, Rhode Island.

Robert D. Quinn has transferred from the staff of VA Regional Office, Seattle, Washington, to the staff of VA Hospital, American Lake, Washington.

Allan Rechtschaffen, a graduate of the VA Training Program, Northwestern University, has been appointed to the staff of VA Hospital (West-side), Chicago, Illinois.

Robert E. Royal has transferred from the position of Chief Clinical Psychologist, VA Hospital, Fort Meade, South Dakota, to the staff of VA Hospital, Danville, Illinois.

Joseph R. Sanders has resigned from the position of Chief Clinical Psychologist, VA Regional Office, Buffalo, New York, to accept a position with the New York State Department of Education as Executive Secretary of the newly created Board of Examiners in Psychology.

Helen Shimota, a graduate of the VA Training Program, University of Minnesota, has been appointed to the staff of VA Hospital, St. Cloud, Minnesota.

Joseph A. Southworth, a former VA trainee, Harvard University, and recently School Counselor,

Newton, Massachusetts, has been appointed to the staff of VA Hospital, Albany, New York.

Robert A. Wagoner, a graduate of the VA Training Program, Duke University, has been appointed to the staff of VA Hospital, Indianapolis, Indiana.

Henrietta V. M. Williams has resigned from the staff of VA Hospital, Knoxville, Iowa.

Benjamin Winsten has been reappointed Chief Clinical Psychologist, VA Center, Kecoughtan, Virginia.

Ranald M. Wolfe has been designated Chief of Research at VA Hospital, Chillicothe, Ohio.

Carl N. Zimet has resigned from the staff of VA Hospital, Albany, New York.

Vocational Counseling

Bartley Bess, Chief, Vocational Counseling Service, VAH, North Little Rock, Arkansas, has resigned and accepted employment with Redstone Arsenal, Huntsville, Alabama.

Ben B. Freeman has completed his doctoral training and has been appointed as Chief, Vocational Counseling Service, VAC, Los Angeles, California.

Bernard H. Light, Chief, Vocational Counseling Service, VAH, Jefferson Barracks, Missouri, has transferred to a like position at VAH, Palo Alto, California.

Lloyd Lofquist, Chief, Vocational Counseling Service, VAH, Minneapolis, has resigned to accept a position on the faculty of University of Minnesota.

Victor Ruderman, Postdoctoral Trainee, has been appointed Chief, Vocational Counseling Service, VAH, Bronx, New York.

William C. Stevens has transferred from the position of Counseling Psychologist, VAH, Perry Point, Maryland, to the position of Chief Psychologist, VA Center, Dayton, Ohio.

William E. Walton has resigned as Chief, Vocational Counseling Service at VAH, Long Beach, California.

Samuel Wexler, Chief, Vocational Counseling at VAH, Pittsburgh, Pennsylvania, has transferred to accept a staff position at VAH, Downey, Illinois.

Robert G. Ferguson has resigned as executive director of the Philadelphia Commission on the Mental Retarded in order to accept the position as

Research Director at the MacDonald Training Center Foundation, Tampa, Florida. The Foundation is at present engaged in a research project, sponsored in part by the Office of Vocational Rehabilitation, designed to study and devise techniques for evaluation, training, vocational placement, and prediction of young adults with mental retardation. The present plans are projected through the next three years and will involve the work of the present Sheltered Workshop and new experimental agricultural program.

The Educational Testing Service is offering for 1957-58 its tenth series of research fellowships in psychometrics leading to the PhD degree at Princeton University. The closing date for completing applications is January 4, 1957. Information and application blanks may be obtained from: Director of Psychometric Fellowship Program, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

The Social Science Research Council will again offer in 1957 all types of fellowships and grants which were awarded in 1956, except undergraduate research stipends. The latter awards can no longer be offered because funds granted to the Council for that purpose have been exhausted. Four new types of grants will be offered for the first time: Grants for research on American governmental processes, for field studies of political groups in foreign areas, and for research on national defense problems since 1939; also faculty research grants unrestricted as to subject matter or discipline within the field of social science. Three summer institutes are now scheduled for 1957, and one or more others may be announced later. Two institutes on applications of mathematics in the social sciences will be held at Stanford University, one for social scientists and one for college teachers of mathematics, the latter being co-sponsored by the Mathematical Association of America. An institute on organization theory and research will be held at Carnegie Institute of Technology. Inquiries should be addressed to the Council at 726 Jackson Place, N. W., Washington 6, D. C.

The National Foundation for Infantile Paralysis announces that fellowships are available for social scientists who desire to apply their professional skills to the emotional, social, and psycho-

logical problems of patients with physical disabilities. For information write to: Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5, N. Y.

Robert M. Allen, professor of psychology at the University of Miami, has been awarded a research grant by the American Philosophical Society to investigate the intercorrelation among the MMPI and Edwards Personal Preference Schedule factors.

National Science Foundation Research Grant Awards. The following research grants have recently been awarded:

Leon Festinger, Stanford University: \$16,500 for a two-year study of "Implications of the Theory of Cognitive Dissonance."

Fillmore H. Sanford, American Psychological Association: \$15,750 for two years for a "National Register of Scientific and Technical Personnel in Psychology."

John M. Stalnaker, National Merit Scholarship Corporation: \$125,000 for five years for "Scholarship Aid, Identification of Academic Talent, and Motivation."

Donald E. Super, Columbia University: \$19,900 for an eight-month study of "Vocational Development and the Choice of Scientific Careers."

The **John Hay Whitney Foundation** has announced the eighth annual John Hay Whitney Foundation Opportunity Fellowship program. Competition for Opportunity Fellowships is open to any citizen of the United States (including residents of territories) who has given evidence of special ability and who has not had full opportunity to develop his talents because of arbitrary barriers, such as racial or cultural background or region of residence. Communications concerning this program should be addressed to: Opportunity Fellowships, John Hay Whitney Foundation, 630 Fifth Avenue, New York 20, New York.

The **Ford Foundation** has announced the continuation of its program of fellowships for training in foreign areas and international affairs for the academic year 1957-58. This program which is beginning its sixth year, is for study relating to Asia, the Near East, the Soviet Union, Eastern Europe, or Africa. Fellowships are available to persons up to 35 years of age who want to combine graduate training in the social sciences or humanities with studies on one of these foreign areas. There are also a few fellowships for postdoctoral special advanced training related to international

relations. For information, write to: The Secretary, Ford Foundation, Attention Foreign Area and International Relations Training Fellowships, 477 Madison Avenue, New York 22, New York.

The **Foundation for Voluntary Welfare** is sponsoring an essay contest, with awards totaling \$13,250, for welfare workers on the topic "A Way to Extend Voluntary Activities and Organization in Social Welfare." Essays must be received by November 15, 1956; for information write to the National Awards Competition, Foundation for Voluntary Welfare, Post Office Box No. 2609, San Francisco, California.

At their Board Meeting, which is annually held in conjunction with the American Psychological Association Convention, Edward M. Glaser of Edward Glaser & Associates was elected President of **National Psychological Consultants to Management, Inc.** William J. Humber of Humber, Mundie & McClary was elected First Vice-President, William Nordli of Nordli, Ogan, Wilson Associates was elected Second Vice-President. John R. Martin of John R. Martin Associates continues as Treasurer and William E. Brown of William, Lynde & Williams is the new Secretary.

The **Seventh Annual Conference of the National Association for Music Therapy** will be held at the Hotel Jayhawk, Topeka, Kansas, October 18, 19, and 20, 1956. Members of allied professions may attend by paying a registration fee of \$5.00.

The **American Psychosomatic Society** will hold its Fourteenth Annual Meeting at Chalfonte-Haddon Hall in Atlantic City on May 4 and 5, 1957. The Program Committee would like to receive titles and abstracts of papers for consideration for the program no later than December 1, 1956. The time allotted for presentation of each paper will be twenty minutes. Abstracts, in sextuplicate, should be submitted for the Program Committee's consideration to the Chairman, Dr. I. A. Mirsky, 551 Madison Avenue, New York 22, N. Y.

I. Ignacy Goldberg has joined the staff of the National Association for Retarded Children as educational consultant. During the first year, Dr. Goldberg will carry out a special field project in curriculum development for "trainable" retarded children. It is planned that he will be available for conferences and workshops with classroom

teachers who are actually working with such children in public schools, "community" schools, and residential institutions. Details of the project, which has been made possible by a grant from the Child Welfare Foundation of the American Legion, can be secured from the National Association for Retarded Children, Inc., 99 University Place, New York 3, N. Y.

The University of Miami School of Medicine and the United Cerebral Palsy Clinic of Miami announce the **Third Annual Workshop in Cerebral Palsy** to be held on October 25 at the Jackson Memorial Hospital in Miami, Florida. The workshop is being coordinated by Robert M. Allen, psychology consultant to the UCP Clinic of Miami.

Springfield State Hospital announces a one-day workshop on October 26, 1956, by Abraham Zeichner, Chief Psychologist, Fairfield State Hospital, Newton, Connecticut. His topic will be "Techniques of Group Therapy with Chronic Psychotics." There is no registration fee. For information write to Dr. Michael H. P. Finn, Chief Psychologist, Springfield State Hospital, Sykesville, Maryland.

The psychology department of the **Crownsville State Hospital** announces its **Fifth Annual Workshop**, to be held October 22 and 23. Bruno Bettelheim of the Orthogenic School, University of Chicago, will discuss theoretical and practical problems in psychiatric treatment of children in a residential setting. He will also present case studies. Registration fee is \$10. For information write to Mr. Vernon W. Sparks, Chief Psychologist, Crownsville State Hospital, Crownsville, Maryland.

M. I. T. Lincoln Laboratory has issued a brochure describing current opportunities in the fields of physics, electrical engineering, mathematics,

and psychology. Doctors and graduate engineers interested in the possibility of working on classified projects may secure a copy of the bulletin by writing: Research and Development, M. I. T. Lincoln Laboratory, Box 24, Lexington, Massachusetts.

The Council of Biological and Medical Abstracts Ltd. has changed the title of their journal, *British Abstracts of Medical Sciences*, to *International Abstracts of Biological Sciences*.

The Joint Commission on Mental Illness and Health will conduct a national survey concerned with the number of persons who feel troubled, what they conceive to be their problems, and their solutions. The purpose of the survey, which will be undertaken by the University of Michigan's Survey Research Center, is to discover the extent of the nation's mental health problem, and the informal and unofficial, as well as the official, resources of the community.

The APA Committee on Ethical Standards has undertaken the task of revising *Ethical Standards of Psychologists* and its companion volume, *A Summary of Ethical Principles*. During the past several months, members of the Committee have worked through several revisions of the code, resulting in a condensed version which contains the essence of the original volume. By stating a code of ethics in a concise form with a small number of major principles and with short explanatory paragraphs spelling out the nature of each principle, the Committee hopes to present a streamlined code which can be widely distributed and read. All members of APA are cordially invited to submit suggestions and criticisms concerning this proposed revision to Dr. Wayne H. Holtzman, Chairman of the Committee on Ethical Standards, The University of Texas, Austin 12, Texas.

Convention Calendar

National Society for Crippled Children and Adults: October 28–November 1, 1956; Washington, D. C.

For information write to:

Miss Jayne Shover
National Society for Crippled Children and Adults
11 South La Salle Street
Chicago, Illinois

American Association for the Advancement of Science: December 26–31, 1956; New York City

For information write to:

Raymond L. Taylor
American Association for the Advancement of Science
1515 Massachusetts Avenue, N.W.
Washington 5, D. C.

Gerontological Society, Inc.: November 8–10, 1956; Chicago, Illinois, Hotel Hamilton

For information write to:

Dr. N. W. Shock, Secretary
Gerontological Society
Baltimore City Hospitals
Baltimore 24, Maryland

Inter-American Society of Psychology: December 27–30, 1956; Rio Piedras, Puerto Rico, University of Puerto Rico

For information write to:

Dr. Werner Wolff
Bard College
Annandale-on-Hudson
New York

American Public Health Association: November 12–16, 1956; Atlantic City, New Jersey, Convention Hall

For information write to:

Dr. Reginald M. Atwater, Executive Secretary
American Public Health Association
1790 Broadway
New York, N. Y.

American Anthropological Association: December 28–30, 1956; Santa Monica, California

For information write to:

William S. Godfrey, Jr.
American Anthropological Association
Logan Museum
Beloit College
Beloit, Wisconsin

American Speech and Hearing Association: November 19–21, 1956; Chicago, Illinois, Palmer House

For information write to:

James Carrell
Speech and Hearing Clinic
University of Washington
Seattle, Washington

American Group Psychotherapy Association, Inc.: January 10–12, 1957; New York City, Henry Hudson Hotel

For information write to:

Dr. Milton M. Berger
American Group Psychotherapy Association, Inc.
345 East 46th Street
New York 17, N. Y.

American Management Association: Conference on Special Personnel (Supervision): November 29 and 30, 1956; New York City, Biltmore Hotel

For information write to:

Mr. James O. Rice
American Management Association
Sheraton-Astor Hotel, Times Square
New York 36, New York

American Psychopathological Association, Inc.: February 22 and 23, 1957; New York City, Park Sheraton Hotel

For information write to:

Donald M. Hamilton, M.D., Secretary
121 Westchester Avenue
White Plains, New York

American Vocational Association, Inc.: December 3–7, 1956; St. Louis, Missouri, Kiel Auditorium

For information write to:

Lowell A. Burkett
Assistant Executive Secretary
1010 Vermont Avenue, N.W.
Washington 5, D. C.

Inter-Society Color Council: March 5, 1957; New York City, Statler Hotel

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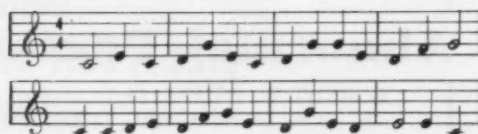
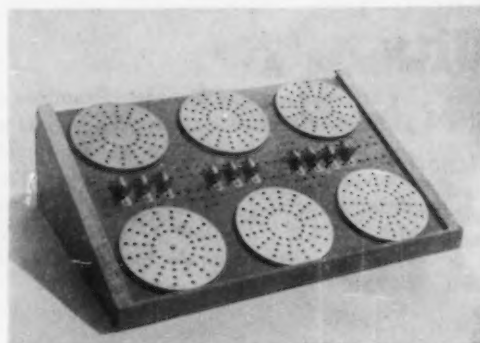
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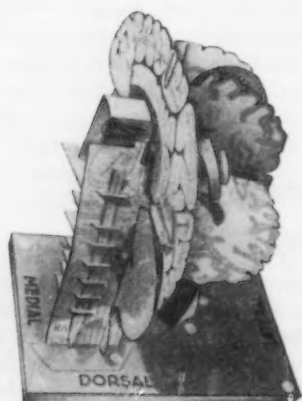
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